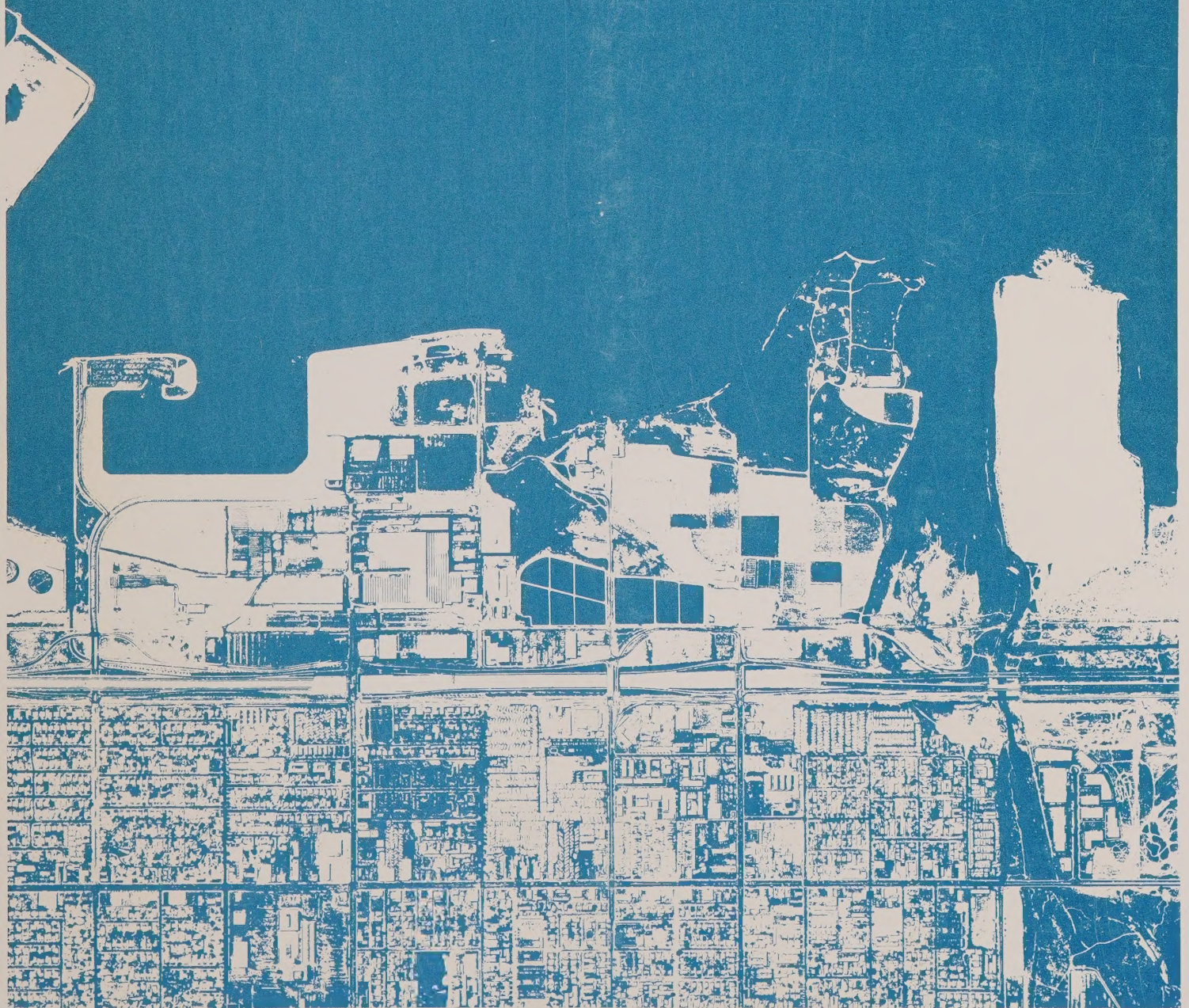


CHULA VISTA BAYFRONT LAND USE PLAN





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CHULA VISTA BAYFRONT LAND USE PLAN

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PHASE II CHULA VISTA BAYFRONT LOCAL COASTAL PROGRAM

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SEPTEMBER 1983

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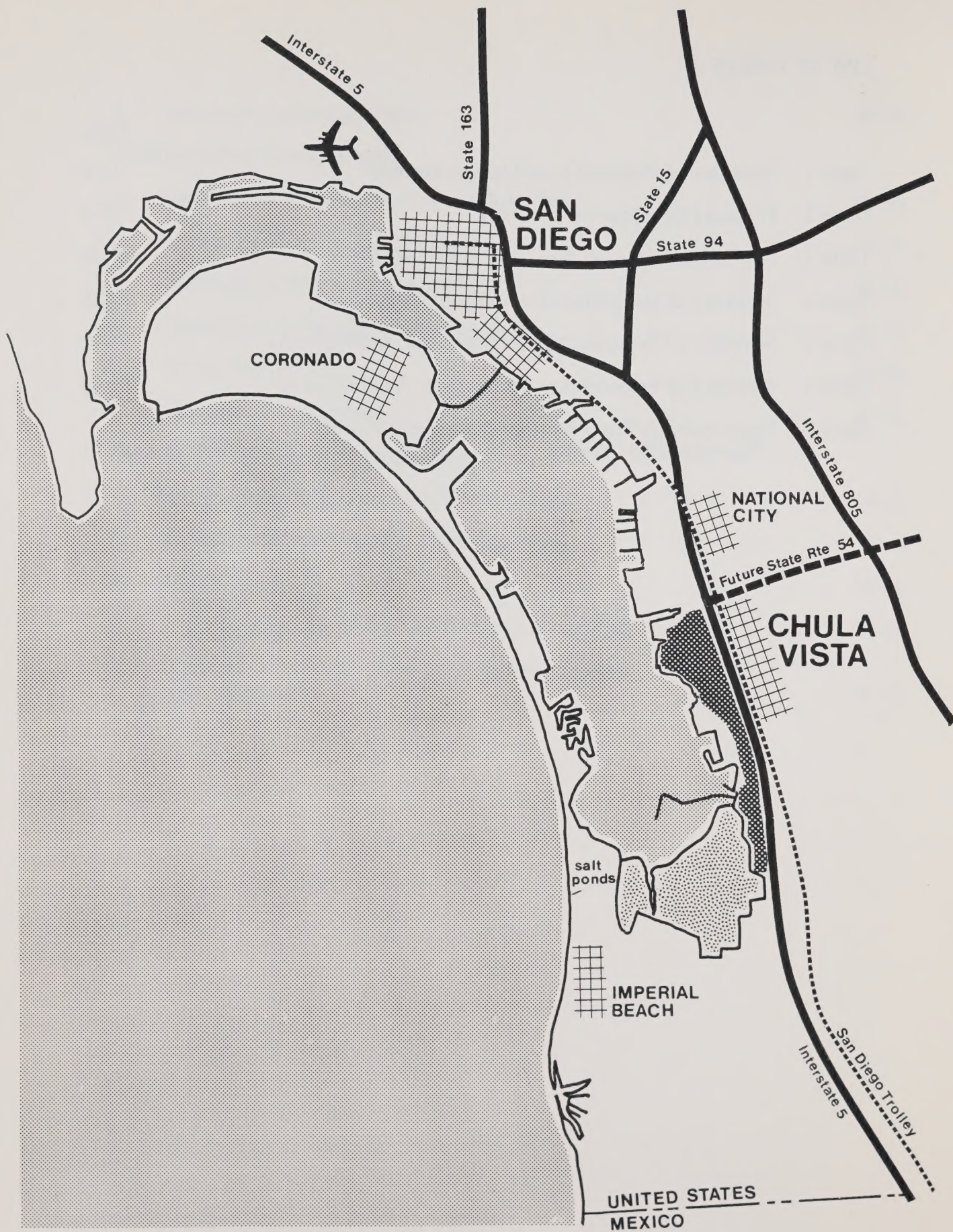


Figure 1. REGIONAL LOCATION

I. INTRODUCTION

AREA LOCATION AND DESCRIPTION

The City of Chula Vista was incorporated in 1911 and became a chartered city in 1949. The city currently has a population of 88,241 and covers an area of 24.8 square miles. Geographically, Chula Vista is located adjacent to the east side of San Diego Bay, eight miles south of San Diego and seven miles north of the International Border (see Figure 1). The Chula Vista Bayfront constitutes one of the last remaining blocks of undeveloped land on San Diego Bay. Regionally, the area is well served by Interstate 5, the major freeway connection between San Diego and Mexico. The scheduled construction of Route 54, and its interchange with Interstate 5 in the Bayfront study area, will further enhance the site's locational advantages. In addition, the Bayfront area is located 10.8 miles from the San Diego International Airport. The Bayfront is also the southernmost area of San Diego Bay to which navigable channels are presently provided for maritime and recreational purposes.

The area within the Local Coastal Plan boundaries encompasses approximately 790 acres, of which 577 are original uplands or filled areas above mean high tide and 213 are in wetlands. Three major ownerships dominate the study area: San Diego Gas and Electric Company at the south end with 84 acres; Rohr Corporation in the central area with 100 acres, and the Atchison, Topeka and Santa Fe Railroad in the northern section, which owns nearly 400 acres. The San Diego Unified Port District holds jurisdiction and ownership of all tidelands lying between mean high tide line and the City of Chula Vista's western boundary. Although the Port area is within the city limits, it is included in the Master Plan for the Port District rather than in the LCP for the city.

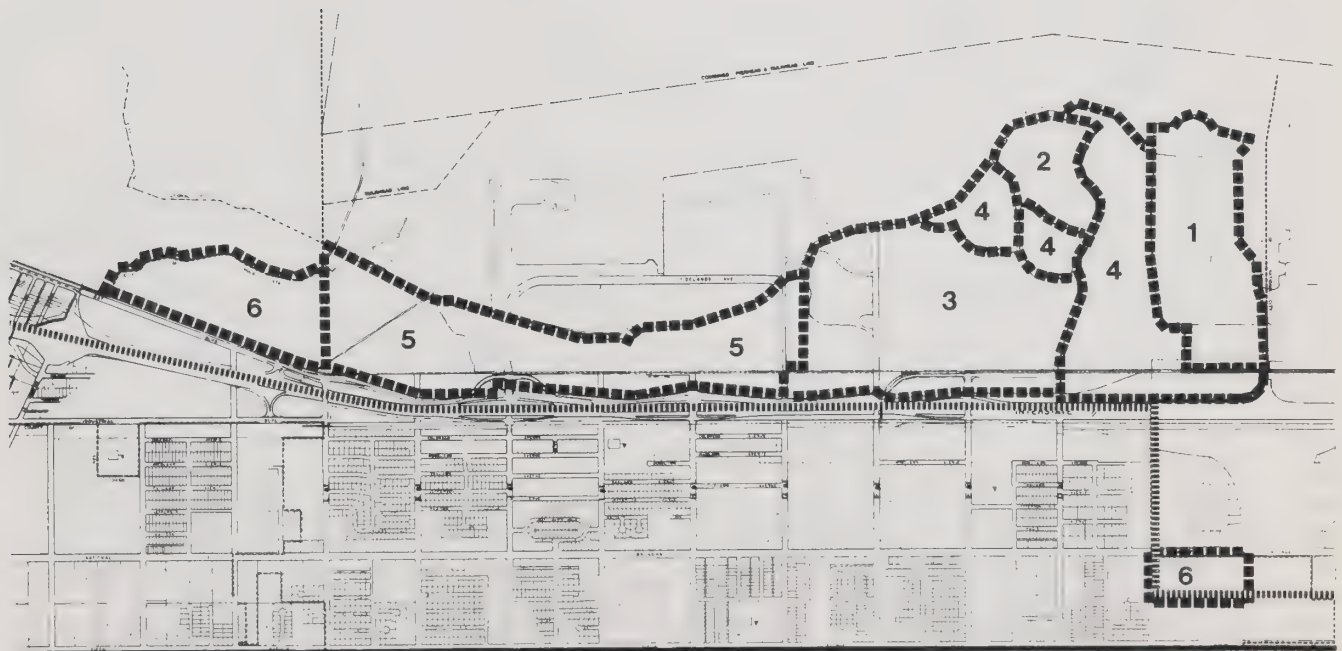
Except for the San Diego Gas and Electric generating facility, the Rohr Corporation's industrial development, and the commercial development adjacent to the highway, the Bayfront is currently either in agricultural use or vacant.

COASTAL ZONE

The boundary of the Coastal Zone follows the centerline of Interstate Route 5, except in the northerly portion of the city. There, it turns east (inland) along the prolongation of C Street to a point approximately midway between Broadway and Fifth Avenue, and then north to the city boundary. The boundary is shown on Figure 2. For the purposes of this Bayfront study the Coastal Zone has been divided into 6 subareas (see Figure 2):

- o Subarea 1 which includes all of the D Street Fill.
- o Subarea 2 which includes Gunpowder Point and the two levees leading to it from the main upland areas (Subarea 3).
- o Subarea 3 which includes all the Bayfront area above mean high tide generally between G and D Streets (generally referred to in the Land Use Plan as the Midbayfront).

- Subarea 4 which includes E Street Marsh, Vener Pond, Sweetwater Marsh, and the Connector Marsh between the Sweetwater and Paradise Marshes.
- Subarea 5 which includes the area generally south of G Street and north of L Street between the mean high tide line and Interstate 5.
- Subarea 6 which includes the area within the city limits south of L Street between mean high tide and Interstate 5 (the southern parcel) and the area inland (east) of Interstate 5 northeast of the intersection of Broadway (National Avenue) and C Street (the inland parcel).



----- Coastal Zone Boundary
 ■■■■■ Subarea Boundaries

FIGURE 2
 CHULA VISTA
 LOCAL COASTAL PROGRAM
 COASTAL ZONE BOUNDARY
 AND SUBAREA MAP

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COASTAL ACT PROVISIONS

The Coastal Act of 1976 requires that every coastal city and county prepare a Local Coastal Program (LCP) to be submitted to and approved by the California Coastal Commission. The Act defines a Local Coastal Program as "a local government's land use plans, zoning ordinances, zoning district maps, and implementing actions which, when taken together, meet the requirements of, and implement the provisions and policies of, the Coastal Act at the local level."

Recognizing that many local agencies were already involved in comprehensive planning programs for their coastal areas, the Coastal Act provided for certain agencies to be designated as Pilot Programs. The City of Chula Vista, because of the extensive planning effort which had gone into the initial Chula Vista Bayfront Redevelopment Project Plan (Bayfront Plan), was so designated. This, the second version of the Bayfront Plan, is intended to serve as the Local Coastal Program for the City of Chula Vista. The plan is a comprehensive and cooperative plan which has evolved from years of effort on the part of the City of Chula Vista, the Chula Vista Redevelopment Agency, the San Diego Unified Port District, property owners, and citizens of Chula Vista. Land use, economic, and environmental studies began as early as 1970, and the planning process has included full public participation and interagency coordination. The City of Chula Vista and the San Diego Unified Port District adopted an initial version of the Bayfront Plan in early 1974. The Redevelopment Agency of the City of Chula Vista formally adopted the portion of the initial Plan within its jurisdiction on July 16, 1974, and in 1975 Tax Allocation Bonds were sold for the Bayfront Redevelopment Project.

Conflicts between development objectives in the 1974 LCP and environmental protection provisions of the 1976 Coastal Act resulted in extensive delays and postponements in certification of an LCP. This Land Use Plan is the result of a subsequent Local Coastal Plan Program begun by the city in 1982 with grant support from the California Coastal Commission. It endeavors to resolve those conflicts and provide a sound planning base for subsequent certification and final adoption of a complete Local Coastal Program.

RELATED PLANNING PROJECTS

There are two major planning projects adjacent to the study area which affect the Bayfront. They have been combined in the Route 54/Sweetwater River Flood Control Channel Joint Caltrans/US Army Corps of Engineers Project. (See Figure 3.)

The Route 54/Sweetwater River Flood Control Channel is a joint California Department of Transportation (Caltrans) and United States Army Corps of Engineers project, with the Corps of Engineers acting as the lead agency. The project was approved as consistent with the Coastal Act on April 26, 1983 by the Coastal Commission. Marsh restoration work has already begun on this project and major highway construction is scheduled to begin around January 1984 with completion expected by 1988. The project combines the construction of State Highway Route 54, from Interstate Route 805 to Interstate Route 5 (including the interchange with Interstate Route 5), with the construction of a flood control channel from Bonita Mesa Road (immediately upstream of Interstate 805) to San Diego Bay. The flood control channel would generally occupy the median between the eastbound and westbound lanes of Route 54. The project includes the widening of a portion of Route 5. The proposed configuration of lanes and ramps is incorporated into the base map for the Land Use Plan provisions.

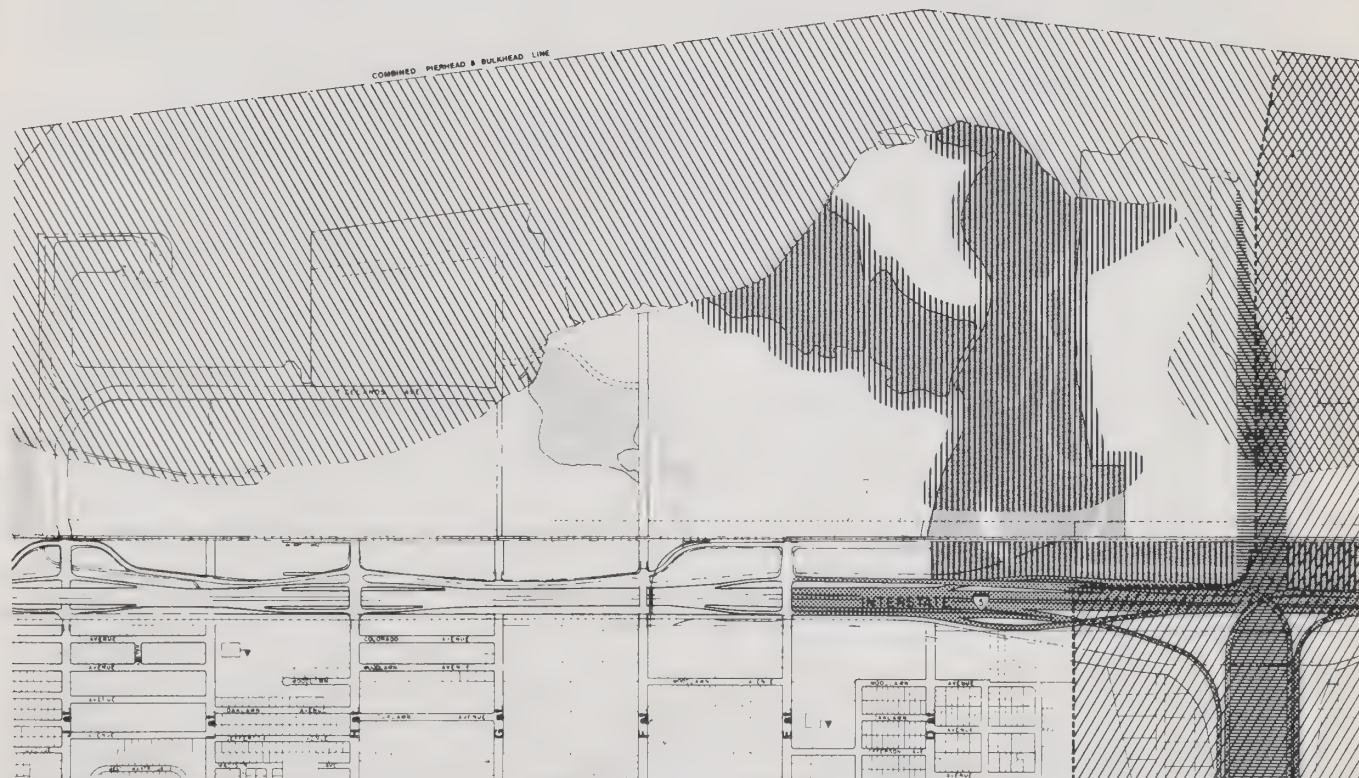


FIGURE 3

CHULA VISTA LOCAL COASTAL PROGRAM PROPOSED PROJECTS AND ADJACENT PLANNING AREAS



0' 1200'

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In addition, the project includes the acquisition of marshlands and the provision of recreational facilities. The acquisition of marshlands will include both the Sweetwater and Paradise Marshes, will incorporate 44 acres as compensation for the impacts of the project and 144 acres for preservation of habitat for endangered species. The recreation facilities will include: bicycle and pedestrian trails, rest and staging areas, and a nine acre beach park located in National City.

As presently designed, the freeway interchange is located along the northeastern edge of the Bayfront. Direct access to the Bayfront would not be provided from the I-5/54 interchange but would occur off I-5 at E Street.

COORDINATED CITY/PORT PLANNING

The Bayfront Land Use, and the subsequent specific plan to be prepared in the implementation phase of the program, establish the conservation and development requirements for coastal zone lands lying inland of the tideland grant line and exclude the San Diego Unified Port District lands which lie to the west (see Figure 3). Close cooperation between the City and the Port will be necessary to ensure: 1) coordination of road, water, sewer and storm drainage improvements; 2) effective management of coastal environmental resources; 3) harmonious land uses and development which permits all portions of the bayfront lands to benefit from the economic, visual and recreational values of the waterfront site; and 4) provision of public access to the bayfront.

Under Article 5 of the State Planning, Zoning and Development Laws, the City is mandated to prepare a comprehensive, long-term general plan for the physical development of lands within the City's jurisdiction. Moreover, Article 8 requires specific plans to be based on the general plan and serve to implement the general plan. It becomes necessary, therefore, that the Bayfront Land Use Plan address the relationship between the lands within the plan area boundaries and the adjoining Port lands. This is done by indicating where the continuity of public facilities (roads, water lines, sewers, storm drainage provisions and pedestrian and bicyclist routes) is to be maintained, where protection of economic and aesthetic values provided by water-oriented views are to be protected, and where safeguards are necessary to prevent conflicts in land use and development.

Specific aspects requiring coordinated action include: 1) the routing and design of Tidelands Avenue in the Midbayfront area; 2) road access to and within the D Street fill area; 3) provision of a protected habitat for the least tern; 4) integration of pedestrian waterfront access; 5) protection of water-oriented views from inland areas; and 6) integration of land use and development on the D Street fill.

The Bayfront Land Use Plan avoids specification of specific land use and public facility locations on the Port's lands since this is properly the responsibility of the Port. At the same time the plan clarifies the City's objectives so that the Port can undertake their planning and development in a manner which is consistent with and supportive of the City objectives.

PLANNING PROCESS AND COMMON METHODOLOGY

In order to design an effective work program for the LCP, it was first necessary to identify the coastal issues affecting the Bayfront. The City of Chula Vista began identifying coastal issues when it first undertook studies of the area over 10 years ago. In November 1982 the city hired the consulting firm of Sedway Cooke Associates to develop a new LCP which would meet all the requirements of the public agencies and interest groups involved in planning for the Chula Vista Bayfront. The first phase of Sedway Cooke Associates' analysis was devoted to identifying the issues affecting the Bayfront. This initial analysis was divided into two major topics with individual analysis conducted within each subtopic area. The categories of analysis are summarized below.

1. Existing conditions including ownership pattern, geologic soils data, sewer and water facilities, roadway and traffic conditions, land uses, natural habitat conditions, and physical/visual attributes.

2. Plans and programs including a review of prior plan documents and reports, review of initial work program, review of coastal commission legislation and guidelines, and review of related plans and programs for proposed projects including the Caltrans/Corps of Engineers project and local agency plans and programs.

Following the initial steps, a methodology for developing a land use plan for the Bayfront was selected. This methodology provided for an assessment of alternative land use plans and programs employing criteria to evaluate both impacts and financial and fiscal feasibility. The alternatives assessment proceeded through the following steps:

1. Land suitability analysis based on updated and detailed information identifying those lands which are suitable for development, those which should be preserved, those for which natural features and attributes make them well suited to recreation use, and those essential for public facilities, roadways, storm drainage, and other public structures and systems.
2. Initial land use analysis to determine the range of types of land uses and intensity which could and should be accommodated.
3. Options formulation to explicitly document the range of development and preservation options available.
4. Options evaluation using a series of tests measuring relative costs and benefits of development. The tests included a detailed projection of traffic impacts for each alternative and the necessary roadway improvements to mitigate these impacts, areawide infrastructure and site preparation costs for each of the alternatives, recommended biologic resource protection measures for each of the alternatives, and financial feasibility and fiscal impact of each of the alternatives.¹

Following a review of the Alternatives Assessment Summary Conclusions by the city, Sedway Cooke Associates was directed to prepare a Land Use Plan reflecting the city's preferred plan.

SUMMARY OF PUBLIC PARTICIPATION

The Chula Vista Bayfront planning effort has been a matter of public involvement since the beginning of the planning stages in November of 1970. From the period of 1970 through 1976 numerous public hearings were held regarding the formulation of the redevelopment project area. The City and the Unified Port District also entered into a joint powers agreement for the planning of the bayfront during this period. The planning process for the current land use plan and local coastal plan began in November of 1982. Since that time 43 newspaper articles with specific emphasis on bayfront planning appeared in the Chula Vista Star-News, the San Diego Union, the San Diego Tribune, and the Los Angeles Times.

¹ The results of these analyses can be found in the "Chula Vista Local Coastal Program: Alternatives Assessment Summary Conclusions," Sedway Cooke Associates, July 14, 1983 and "Financial Analysis of Alternatives for Development of the Chula Vista Bayfront," Gruen Gruen + Associates, August 1983, plus amendments.

Fifteen public discussions regarding the bayfront have taken place with regard to specific agenda items by the Redevelopment Agency. These meetings are open to the public. In addition three joint Redevelopment Agency/Planning Commission meetings were held in order to consider options and alternatives and the final land use plan that is being submitted. The City of National City, the Unified Port District, and the County of San Diego are other local jurisdictions that have been involved in the bayfront planning effort. These separate jurisdictions have also held discussions in relationship to their input regarding the Chula Vista plan. No less than eight meetings have been held with staff representatives of the aforementioned public agencies in addition to Caltrans, the U.S. Army Corps of Engineers, State Department of Fish & Game, and U.S. Bureau of Sports Fisheries. Accounts of all the staff and public meetings are duly recorded and can be found in the City of Chula Vista Community Development office.

In addition to public meetings, staff meetings, and newspaper articles, local radio and television stations have carried information regarding the bayfront planning effort by the City of Chula Vista. Several television stations have done five-minute segments regarding the Chula Vista Bayfront and its development potential and ecological constraints. The local Chamber of Commerce and service organizations have been particularly involved in the planning process by having presentations made by the Chula Vista staff to their organization, and by sending representatives to the public meetings. A public hearing, duly advertised, will be held prior to the submittal of the implementation documents.

ORGANIZATION OF THE LAND USE PLAN

The Land Use Plan is organized into the following major sections:

- Chapter I provides the introduction and setting.
- Chapter II provides a summary of the Land Use Plan provisions and their relationship to the substantive issues.
- Chapter III, Areawide Plan Provisions, provides the existing conditions, basic objectives, and plan provisions for the following areas: Land Use, Circulation and Public Access, Utilities and Areawide Grading, Environmental Management, Physical Form and Appearance.
- Chapter IV provides subarea site specific development and design provisions.
- Chapter V provides a discussion of relevant Coastal Policies included in the California Coastal Plan.
- Chapter VI identifies the primary measures to be used to implement the Plan.
- Appendix A: Summary of Development Potential Permitted by Plan Provisions.
- Appendix B: Summary of Public Access Opportunities Permitted by Plan Provisions.

II. SUMMARY OF SUBSTANTIVE ISSUES AND LAND USE PLAN PROVISIONS

The primary objective of the Chula Vista Bayfront Land Use Plan is to achieve a development plan that is consistent with the California Coastal Act, financially feasible, fiscally responsible and will result in a visually attractive setting compatible with the major natural features of the area. While a number of substantive issues have been identified during the course of the Plan's preparation, it has been the intent of the City to resolve them through specific mitigation measures incorporated into the final plan.

The Land Use Plan includes a large of number of very specific land use, circulation, utility, environmental management, and form and appearance provisions. These are highly integrated in a way to mutually support the explicit goal of merging environmental protection with land development and public access objectives. In order to help focus the discussion of the Plan on the overriding issues, this chapter provides a short summary of substantive issues together with the Plan's response. These issues are:

- Tidelands Avenue Extension
- Gunpowder Point Development
- Least Tern Protection
- Wetland Buffer Characteristics
- Wetland and Upland Enhancement

TIDELANDS AVENUE EXTENSION

Tidelands Avenue is a necessary circulation element for the Bayfront. Extending it to D Street fill area is essential to permit this area to develop in a way that is compatible with the Midbayfront and Gunpowder Point. Leaving the D Street fill isolated and cut off from the rest of the Bayfront would likely result in the area remaining an underutilized, surplus industrial site too expensive to develop to be competitive with alternate industrial locations.

Providing for the extension of Tidelands Avenue will: (1) permit the area to develop with sufficient intensity to carry the burden of site improvement costs; (2) provide significant new opportunities for public access to the waterfront; and (3) establish a land use that will promote the financial feasibility of the remaining Bayfront development.

Integrating the need for access in the Bayfront with protection of wetland resources has focused attention on two primary concerns. The first of these is the protection of the F-G Street Marsh and the second is the crossing of Sweetwater Marsh. The Plan provides for the following measures to assure the most compatible relationships.

By realigning Tidelands Avenue further to the west in a gentle arc, F-G Marsh will be protected from any filling necessary for roadway construction. The realignment will join the present terminus of the improved section of Tidelands Avenue on Port lands.

The Sweetwater Marsh crossing included in the Land Use Plan has been relocated from a right-of-way parallel to and westerly of the SD & AE Railroad. The right-of-way, secured by Caltrans and reserved for the present time is designated in the Plan as protected wetlands. Final disposition of this area should be included in an overall management program that includes ownership, restoration, and maintenance for all the wetland resources and buffer areas.

The current alignment for the Tidelands Avenue crossing is directly on top of the existing railroad bed. By integrating the roadway with the existing railroad, the crossing 1) avoids unnecessarily separating the wetland into isolated units, 2) minimizes the necessary fill required for the roadbed, and 3) affords opportunities for enhancing the quality of the adjacent wetland habitat. The Tidelands crossing provides for bridging on a causeway structure for up to fifty percent of the length of the crossing, removing the railroad levee in these sections of the wetland and consolidating fill in a widened roadbed for the remaining portions. The roadway construction will include some necessary filling of portions of the wetland that presently experience poor tidal flushing. An equivalent amount of fill will be removed from the railroad levee by increasing the amount of bridging on a causeway structure from approximately 15 percent of the length of the crossing to 50 percent of the length of the crossing. The increased bridging will provide for improved tidal flows to the connector marsh that Caltrans is restoring as part of the adjacent highway project.

These provisions for the Tidelands Avenue crossing are the least environmentally damaging alternative for providing the necessary connection between the D Street Fill and the Midbayfront. On balance it will provide a better functioning wetland than presently exists.

GUNPOWDER POINT DEVELOPMENT

The major issues that involve the character and form of development on Gunpowder Point include (1) the ecological connection between the wetland and adjacent wetland areas utilized for both foraging and refuge by wetland wildlife, (2) the existence of the Belding's savannah sparrow and light-footed clapper rail, and (3) the potential impact on adjacent wetlands by utilizing the existing levees as roadway access to development on the Point. Denial of the 1979 Bayfront LCP was partially based on opinion that the Gunpowder Point upland area was critical to the health of the surrounding Sweetwater Marsh habitat and to the existence of the Belding's savannah sparrow and light-footed clapper rail.

The final report by Jones and Stokes, "The Analysis of Select Biological Issues Relating to the Chula Vista Bayfront Plan," March 10, 1983, specifically addresses the ecological link between marsh and upland. As part of the original field work completed by Jones and Stokes and included in that report, an ecotone between the marsh and upland was identified and mapped. The major findings relating to this link are provided below:

1. "The upper boundary of the marsh-upland ecotone can be mapped with a reasonable degree of accuracy because of the distinct changes in vegetation across the ecotone. The ecotone is generally narrow, varying from 1-3 meters in

width at most of the transect locations on Gunpowder Point. Because of occasional use by Belding's savannah sparrows, this zone should be preserved.

2. There is little evidence of interaction producing a transfer of materials from Gunpowder Point to Sweetwater Marsh.
 - Little energy or nutrient transfer is taking place from the upland to the marsh. There is no well-defined physical mechanism, such as downstream transfer of detritus, to carry nutrient material off Gunpowder Point and into the marsh.
 - Assuming no deterioration of water quality or alteration of water flow, the food web within the marsh would not undergo major changes following a loss of the upland, especially if the ecotone remained intact. Fish and invertebrates in the marsh display no identifiable link to activities on upland habitat.
 - Some transfer of energy and nutrients occurs from Sweetwater Marsh to the Gunpowder Point upland due primarily to the activities of birds and mammals. These links involve upland predators (e.g., gopher snakes, long-tail weasel) occasionally foraging in the marsh. Wide-ranging raptors (e.g., white-tailed kite) may perch on uplands and forage over both wetlands and uplands. Energy flow in these links is predominantly "uphill" from marsh to upland (i.e., upland species are making use of wetland species).
3. Field surveys indicate that Belding's savannah sparrows may make brief, temporary use of a narrow band of upland habitat (10-15 meters wide) immediately adjacent to the upland-ecotone boundary during very high tides when their preferred marsh habitat is inundated. Most Belding's savannah sparrow activity occurs 10 meters or more into the marsh from the upland-ecotone boundary.
4. Loss of all upland habitat within the Chula Vista Bayfront would reduce species numbers and diversity for the Bayfront. The reduction would result primarily from the loss of strictly upland species (e.g., cottontails, meadowlarks). There need not be any loss of wetland species or wetland habitat, provided: (1) a band of upland habitat above the ecotone-upland boundary is retained as a refuge for Belding's savannah sparrows, light-footed clapper rails, and shorebirds during times of extreme high tide and severe storms; (2) human activity (including domestic pets) within the marsh proper is limited; and (3) good water quality is maintained. The upland band could provide some habitat for species that rest or roost on the upland and used the wetland for foraging."

Although the Jones and Stokes analysis indicates that there is only a limited portion of upland directly related to the wetland wildlife habitat, the Land Use Plan has adopted a conservative approach to this issue. The Plan provides for a limited building envelope to be located in the southwest zone of the island adjacent to the open Bay. A total of fourteen acres of the total 40.9 acres of upland, (34 percent) will be developed as a destination resort hotel. The remaining area is devoted to wetland buffer, an eight acre public park and 9.6 acres to be regraded and revegetated for use as an upland wildlife habitat.

The land use provisions of the Plan permit a floor area ratio of 0.5 over the 14 acre site. This intensity will permit the construction of a hotel with approximately 400

rooms with conference facilities and commercial support for the hotel and conference visitors.

The location and scale of the permitted development will not impact the critical ecotone mapped by Jones and Stokes, nor interfere with the observed flight patterns of bird species. Confining the development to 34 percent of the upland area will provide for an extensive upland reserve. This provision contrasts with the 1979 LCP where up to 80 percent of the upland was to be developed.

The detailed site and development design provisions included in Chapter IV provide for an 8 story structure, conditionally up to 12 if it can be shown that the increased height will result in a superior solution visually and environmentally. The permitted height of the hotel structure is the result of the primary objective to reduce the projects land coverage.

Vehicular access to Gunpowder Point is accommodated by allowance for a two-lane, controlled access road on the south levee. Pedestrian access is also provided for on the south levee by a boardwalk adjoining the roadway. Parking on the island is limited to the minimum necessary to serve the hotel/conference facility. Parking is encouraged off the island at a remote facility in the Midbayfront for staff use and for guest use beyond the permitted 220 surface parking spaces. The combination of these provisions will minimize the traffic impact on the adjacent wetland wildlife.

LEAST TERN PROTECTION

One of the unresolved issues identified in the environmental documents prepared for the joint Caltrans/Corps of Engineers project was the permanent protection of the habitat for the endangered Least Tern utilizing the D Street Fill area. Denial of the 1979 Bayfront Plan LCP was partially based on the opinion that about 66 acres of the D Street Fill should have been, but was not, set aside as a least tern nesting site. The review of the literature and file data (Jones and Stokes, March 1983) indicates that size per se is not the key to a successful California least tern nesting reserve, but rather one of a combination of interacting factors.

"The five interacting factors critical to fledgling success are:

1. Access to open water (availability of small fish for food). This factor apparently is not a problem at D Street Fill with the adjacent marsh and bay.
2. Suitability of nesting substrate.
3. Area of site (smallest known successful site is 0.33 acre).
4. Predator access (terrestrial, both wild and domestic, and avian).
5. Human harassment.

Also important is the birds' perception of the area as a safe site; for example, a water barrier seems to provide a sense of security for the terns. An unobstructed horizon or open space character may contribute to this perception.

If terrestrial predation and human harassment are clearly eliminated by appropriate design of a nesting reserve, an area smaller than the originally requested two-thirds of D Street Fill acres could successfully provide nesting area. A formally established and managed nesting reserve that is designed to include all the pertinent recent and ongoing research may not have to be larger than 10 acres to successfully fledge California least tern. Sites smaller than 1 acre have been successful when other critical factors have been met."

In response to the need to establish an appropriate reserve for the California least tern, the Land Use Plan provides for a total of 10 acres of upland habitat at the southwest corner of the D Street Fill to be set aside as a sanctuary. The sanctuary will straddle the boundary between the San Diego Unified Port District Lands and the privately held land within the Bayfront. While this location requires joint commitments from the City and the Port District, it is superior to other alternatives totally within the Bayfront. At this designated location, the sanctuary will be surrounded by the greatest amount of natural habitat, exposed on three sides by Bay or extensive wetlands.

In an effort to coordinate the environmental mitigation measures included in the joint Caltrans/Corps of Engineers project, the Land Use Plan relocates a 9.6 acre area which will be converted from upland to wetland. The Plan provides for this conversion to be utilized to 1) create a channel separating the tern sanctuary from the remaining upland area of D Street Fill, and 2) enhance the feeding grounds for the sanctuary and increase isolation by locating the remaining portion of the conversion area directly east of the sanctuary.

WETLAND BUFFERS

A 100 foot upland buffer around much of the existing wetlands has been included as necessary mitigation for the Caltrans/Corps of Engineers project. The integration of this buffer into adjacent development patterns is included as part of the Chula Vista Land Use Plan.

The Land Use Plan provides for an extension of this typical 100 foot wide buffer around wetland areas not presently included in the Caltrans/Corps of Engineers project. These areas include the F-G Street Marsh and around the converted upland on the D Street Fill.

The Land Use Plan includes prototypical buffer cross sections that integrate public access, wetland screening, fencing to control access to the wetlands, and the interface with adjacent private development. These prototypical sections identify the critical features of protection and joint use to make these buffers effective transitions between natural and man-made environments.

Ownership and responsibility for improvements and maintenance are all aspects of the buffers which will require joint cooperation among private development and many public agencies, and will be included in an overall wetland management program.

Within the City of Chula Vista's jurisdiction, ownership and responsibility for improvements and maintenance are all aspects of the buffers which will require joint cooperation between the public and private sectors and will be included in an overall wetland management program.

WETLAND AND UPLAND ENHANCEMENT

In addition to the environmental protection measures included in every aspect of the Land Use Plan, additional opportunities for wetland and upland enhancement have been identified and are included in the Environmental Management Provisions. These enhancement provisions are summarized in tables 6 and 7 of the Land Use Plan. Principally they include:

- A 9.6 acre increase in high quality salt marsh adjacent to the Sweetwater Marsh and improved tidal flow in the connector to paradise Marsh.
- A 3.4 acre increase in high quality mudflat on the east margins of Vener Pond.
- A 3.0 acre increase in high quality saltwater marsh on the margins of Vener (E Street Marsh).
- A 2.5 acre increase in high quality saltwater marsh, a cleaned and restored 15 acre saltwater marsh, and integration of a 1.5 acre seasonal freshwater habitat in the F-G Street Marsh area.
- The provision of a freshwater supply to support seasonal inflow in the F-G Street Marsh by utilizing the available high quality water from a proposed reverse osmosis operation in the Bayfront.
- Visual enhancement, landscape screening, and fencing of the wetland buffers.
- Isolation of a 10 acre sanctuary from human or domestic animal impact for the Least Tern Sanctuary.
- The restoration of 9.6 acres on Gunpowder Point to an upland reserve. (Note: This is in addition to the 100 foot buffer.)
- The removal of debris and control of drainage in the degraded lagoon at the western edge of Gunpowder Point.

III. AREAWIDE PLAN PROVISIONS

This chapter is organized into five separate sections: Land Use, Circulation and Public Access, Utilities and Areawide Grading, Environmental Management, and Physical Form and Appearance. Each of these sections includes a brief description of existing conditions and then provides basic objectives regarding modifications to the Chula Vista Bayfront area. Following the basic objectives, specific policy provisions are defined to guide development and resource enhancement in the Bayfront for each topical area of concern. The areawide plan provisions are supplemented with a policy diagram keyed to the text to clarify the intent of the specific provisions.

LAND USE AND INTENSITY

The Local Coastal Plan area encompasses approximately 790 acres; 577 acres are original uplands or filled areas above mean high tide and 213 acres are in wetlands. Three major ownerships dominate the planning area: San Diego Gas and Electric Company (SDG & E) at the south end with 84 acres; Rohr Corporation in the central area with 100 acres (an additional 56 acres of Port owned land not within the LCP area are leased by Rohr); and the Atchison, Topeka and Santa Fe (AT & SF) Railroad in the northern section, which owns nearly 400 acres.

The balance of the planning area is comprised of approximately twenty small holdings. Most of the holdings are located between the San Diego and Arizona Eastern (SD & AE) Railroad tracks and the freeway, and between G and D Streets. These range in size from one-half to three-and-one-half acres.

EXISTING LAND USE

Approximately 175 acres or 30 percent of the upland study area is in urban use. The major land-user is Rohr Corporation, with manufacturing activities ranging from research and development to assembly. Rohr's operations straddle the LCP area and the adjacent San Diego Unified Port District lands.

A small group of buildings, including an unoccupied restaurant and convention facility now used for boat building and a 34-unit motel, are located at the end of F Street. The Rayne Water Systems Company, located at the foot of F Street, treats bay water to provide high quality water for industrial application. In the northern portion of the planning area between the San Diego and Arizona Eastern Railroad tracks and the freeway, smaller property holdings include three recently completed highway-related restaurant facilities and a 118 unit motel.

The remainder of the planning area is either vacant or used for agricultural purposes. Vener Farms, which leases approximately 125 acres from Santa Fe, is engaged in truck farming. The vacant lands are composed of approximately 184 acres of salt marshes along the Sweetwater River, and a 41 acre area which includes an abandoned plant site surrounded by marshes and a salt-water pond. Both of these latter properties are within the lands owned by the Santa Fe Railroad.

BASIC LAND USE OBJECTIVES

In accordance with policies adopted by the City of Chula Vista following a detailed analysis of alternative development scenarios for the Bayfront, land use objectives and specific designation of land uses for various areas of the Bayfront are proposed. These are consistent with the adopted policies and represent a realistic appraisal both of development potential and constraints of the Bayfront and economic and market conditions prevailing in the greater San Diego area. The basic land use objectives provide:

1. **Mixed-Use.** Primary use of the Bayfront should encourage a mixed-use development combining residential, commercial/recreational uses, and public parks. The mixed-use character of the Bayfront will (1) minimize the traffic impact of development on the surrounding roadway system by splitting the peak hour traffic between trip origins and destinations; and (2) significantly expand public access and use of the Bayfront.

2. **Development Reserve.** A portion of the Bayfront land has not been given a specific land use designation. This will allow the Bayfront development to proceed with key parcels designated for particular uses while retaining the necessary flexibility to respond to future market conditions. The areas designated as reserve are those areas which could be developed as residential, commercial, or a combination thereof and not jeopardize the viability of adjoining development.

3. **Integrated Bayfront.** A primary objective is to link together into a single compatible mixed-use development the major upland parcels on either side of Sweetwater Marsh. The Midbayfront (between G Street and the Sweetwater Marsh) and the D Street Fill area are the major upland resources. Existing uses to the north (in National City) and to the south (Rohr Corporation and SDG & E facilities) are industrial. Without an effective circulation link between the Midbayfront and the D Street Fill area, access to the D Street Fill area would be confined to a route through National City via the 24th Street interchange with I-5. This would limit use of D Street to industrial development for which there is extremely limited market demand. As a result, the D Street land area would likely remain derelict and unsightly, pose a severe handicap on the financial feasibility for the rest of the Bayfront development, and eliminate opportunities for enhancing public access and enjoyment of the Bayfront.

4. **General Industrial.** General industrial uses should be specifically excluded from the Midbayfront area but permitted in the existing industrial areas adjacent to Rohr Corporation, the SDG & E facilities, and the inland parcel. The reasons for this objective include the following:

Water Related Lands. The water-related lands of the Chula Vista Bayfront are a unique resource and should be reserved for public and private uses which can benefit from, as well as protect the location.

General Industrial Use. There are no overriding functional reasons for using Bayfront land for general industrial use; the industrial growth of San Diego County is not likely to be impeded if the Bayfront lands are not developed for this use.

Non-Water Related Use. The inclusion of more non-water related uses in the area would irreversibly commit the shoreline from National City south through the planning area as an area that could be marketed only for industrial purposes.

Economic Base. The overall economic welfare of Chula Vista would be better served by uses of this land which broaden the economic base of the community.

5. **Wetland Protection and Enhancement.** The existing saltwater marshes, ponds, and mudflats should be preserved and enhanced where appropriate to protect the many natural resource values of the habitat and contribute to the visual quality of the Bayfront.

6. **Public Open Space.** Ample opportunities for public open space and community and neighborhood parks adjacent to the natural resources of the Bayfront should exist to increase public access to the waterfront. While a number of access opportunities should be provided, including pedestrian, bicycle, and visual access from both adjacent development and major automobile circulation routes, care should be taken to protect wildlife resources from disruptive intrusion.

PERMITTED USES

The Land Use Map, Figure 4, shows recommended locations for permitted uses. The permitted uses include: industrial, residential, development reserve, landscaped parking, commercial, public open space, and wetlands. A more detailed mapping of public open space is provided in Figure 11. Table I provides a summary of land use distribution within the study area. A brief description of the permitted uses follow.

1. **Industrial.** The industrial land uses are confined to an area generally south of G Street, plus the inland parcel east of I-5. Existing uses will be permitted to continue and expand. Allocation: 270 acres (34.2 percent).

2. **Residential.** Residential uses are limited to high density multiple-family dwellings in clusters of varying size and configuration to provide a broad range of housing types. Lower scaled townhouse-type construction can generally provide a transition at the critical waterfront edges to higher, more dense structures further inland. This configuration will afford maximum views and vertically integrate the proposed new uses into their natural setting. Allocation: 37 acres (4.7 percent).

3. **Development Reserve.** The development reserve permits residential, commercial, or a mixed-use project combining both uses. Commercial uses are limited, however, to the office park in the Midbayfront area and marine-related commercial on the D Street Fill development reserve. Allocation: 22 acres (2.8 percent).

4. **Landscaped Parking.** Portions of the San Diego Gas and Electric power line right-of-way (ROW) that runs the length of the planning area are to be physically improved at the ground level with landscaped parking areas. In order to encourage landscape improvements to this area, development bonuses are permitted for projects adjacent to the ROW. These bonuses allow the development to increase permitted densities and utilize the ROW for parking lot expansion. Bonuses are calculated by applying the permitted land use intensity of the adjacent parcel to the portion of the ROW included in the project and transferring this added development of the ROW onto the project site. In order to qualify for the development bonuses, it is recommended that provision be made for long term lease agreements for parking on the ROW between the project proponents and San Diego Gas and Electric Company. Allocation: 19.5 acres (2.5 percent). Note: 8.9 acres are presently used for parking by Rohr Corporation.

TABLE I

SUMMARY OF PROPOSED LAND USES BY SUBAREA
(In Acres)

LAND USES	TOTAL	SUBAREA					
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
Industrial	269.9					161.1	108.8
Residential	37.1	19.0		18.1			
Development Reserve	22.0	13.4		8.6			
Commercial	97.1						
• Office/Park	52.0			52.0			
• Highway-Related	23.4			20.3		3.1	
• Marine-Related ¹	7.7	7.7					
• Specialty Retail	*			*			
• Hotel ²	14.0		14.0				
Landscaped Parking ³	19.5			10.6		8.9	
Public Open Space	310.0						
• Wetlands ⁴	222.3	9.6		19.0	184.0	9.9	
• Wetland Buffers ⁵	33.8	9.0	9.2	15.6			
• Upland Resources ⁶	14.9	5.3	9.6				
• Parks	39.0	2.0	8.0	26.3		2.7	
Roadways and ROWs ⁷	<u>34.1</u>	<u>7.7</u>		<u>19.2</u>		<u>7.2</u>	
TOTAL	789.9	73.7	40.8	189.7	184.0	192.9	108.8

¹Includes area designated for marina.

²Includes only the area designated for hotel-related development on the Gunpowder Point upland area.

³Areas within the SDG & E ROW suitable for parking with landscaped improvements.

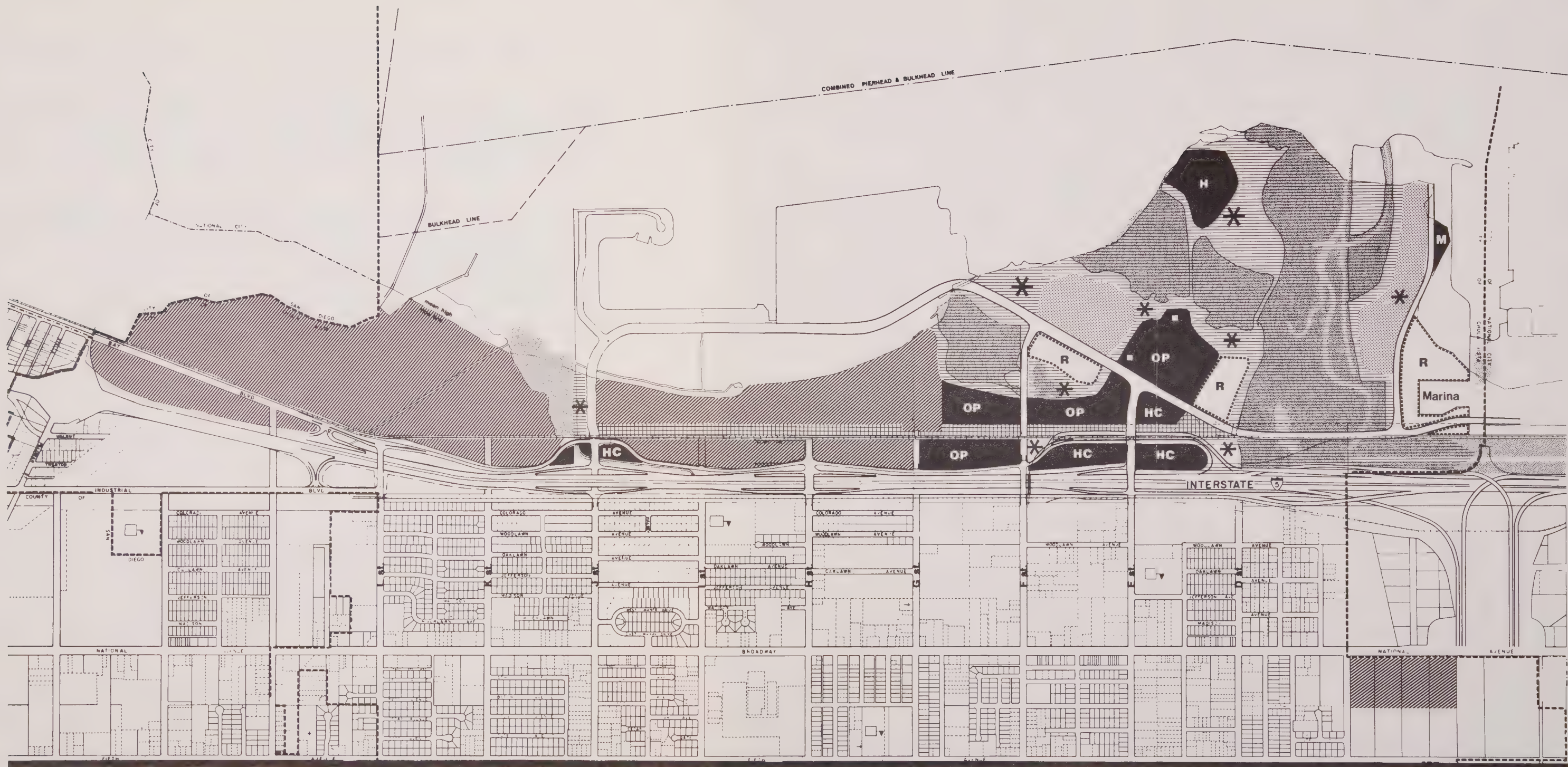
⁴Includes areas to be acquired by the Corps of Engineers as mitigation for the proposed Sweetwater Channel flood control improvements. Also includes areas to be acquired by Caltrans for marsh restoration or upland conversion to marsh as mitigation for freeway improvements.

⁵Includes 100' wide buffers to be acquired by the Corps of Engineers as mitigation for the proposed Sweetwater Channel flood control improvements. Also includes a similar 100' buffer surrounding the F-G Street Marsh not a part of the Corps of Engineers project.

⁶Includes that portion of the proposed Least Tern Reserve island not within the San Diego Unified Port District's lands. Also includes restored upland habitat on Gunpowder Point.

⁷Includes major arterials proposed or existing to serve development. Also includes portions of the SDG & E ROW not included as wetlands or landscaped parking areas and portions of the AT & SF railroad ROW.

*Approximately 4.0 acres within the Office Park designation are proposed for a specialty retail facility to serve the hotel/recreational, office, and residential uses.



- | | |
|--|--|
|  Industrial |  Commercial |
|  Residential |  Office Park |
|  Development Reserve |  Highway Related |
|  Landscaped Parking |  Marine Related |
| |  Specialty Retail (alternative sites) |
| |  Hotel |

- | |
|--|
|  Public Open Space |
|  Community/Neighborhood Park |
|  Wetlands |

FIGURE 4
CHULA VISTA
LOCAL COASTAL PROGRAM
LAND USE
ELEMENT



0' 1200'

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5. Commercial. A number of specific commercial uses are permitted for the Bayfront. They include:

Office Park. An office park within the Midbayfront, would be permitted as a campus type plan clustered around central pedestrian-oriented open spaces and landscaped areas with peripheral parking. Allocation: 52.0 acres (6.6 percent). Note: this allocation includes an allowance of approximately 4.0 acres for a specialty retail facility integrated with the office park use. The precise area allocation is subject to market conditions.

Highway-Related. This land use designation includes primarily motel and restaurant facilities similar to the existing development that principally serve auto-oriented traffic and require clear visibility from the I-5 corridor. Additional permitted uses would include gas stations. Land uses not permitted within this designation are those which would principally serve pedestrian traffic or those that would be more appropriate in connection with the specialty retail center provided for elsewhere in the Plan. These non-permitted uses include: convenience retail, food and beverage retail sales, business and personal services, and entertainment facilities. Allocation: 23.4 acres (3.0 percent).

Marine-Related. This land use designation includes commercial uses directly related to waterfront activities. Permitted uses include (1) retail sales: eating and drinking establishments, food and beverage sales, ship chandleries, boating and yachting sales, etc.; (2) business and personal services: repair services catering to boat or marina needs and limited ship repair facilities appropriate to the scale of the land resource and adjacent uses; and (3) boat marinas or haul-out areas. Allocation: 7.7 acres (1.0 percent).

Specialty Retail. This land use designation includes retail uses which support the hotel-conference facility, adjacent office park uses, and adjacent residential uses. Additional uses may include those that would provide a regional attraction but not compete with the general commercial services of the Chula Vista downtown. Permitted uses include (1) retail sales: convenience retail, eating and drinking establishments, and food and beverage sales; (2) business and personal services: business support services, communications services, entertainment, finance, insurance, and real estate services; and (3) personal and repair services. Allocation: 4.0 acres (0.5 percent).

Hotel. This land use designation refers to a destination resort hotel with conference facilities. Included in the permitted land uses are recreational facilities necessary to support the hotel function and on site parking for 440 cars. Allocation: 14.0 acres (1.8 percent).

6. Public Open Space. The public open space designation refers to all physically accessible and visually accessible open lands for public use and enjoyment. They include wetlands, wetland buffers, upland resources, and parks. (See Figure 11 for specific location of the open space uses described below.)

Wetlands. This land use designation includes all the existing, restored, enhanced, or newly created salt marshes, ponds, and mudflats that generally fall below the mean high tide line, (datum 4.89 feet) or are periodically subject to tidal action. No use is proposed beyond natural habitat protection and minor scientific or educational uses. Allocation: 222.3 acres (28.1 percent).

Wetland Buffers. This land use designation includes the upland buffer zone adjacent to the wetland areas required for habitat protection and preservation of the health and vitality of the adjacent wetland ecosystem. Permitted uses in the buffer zones include provisions for controlled public access, minor grading and landscaping, and minor scientific or educational uses. Provision has been made for an interpretive center to be established within the buffer zone at one of three alternative locations as indicated on the Environmental Management Map, Figure 11. Allocation: 33.8 acres (4.2 percent).

Upland Resources. This land use designation includes the remaining upland habitat areas included within the Environmental Management Zone. These are: (1) the Least Tern Reserve; and (2) the upland revegetation zone on Gunpowder Point. No uses are permitted on the Least Tern Reserve except for minor scientific or educational uses. The Upland Revegetation Zone on Gunpowder Point will be accessible to pedestrians but not improved for specific uses except passive recreational uses and minor scientific or educational uses. Allocation: 14.9 acres (1.9 percent).

Parks. A series of community or neighborhood parks to be used for recreational would be established throughout the Bayfront. Limited parking would be provided at several of the parks, and all would be linked via a continuous, publically accessible pedestrian system. Allocation: 39 acres (4.9 percent).

DEVELOPMENT INTENSITY

The proposed intensity of development is based on height limitations, parking requirements, on-site open space or landscape provisions, traffic capacity, and economic feasibility. The intensity of development consequently varies by land use type.

1. Height Limits. The recommended building heights for the Bayfront are indicated in Figure 5. The prevailing height limit is four stories throughout most of the Bayfront. This limit allows for extensive open space and landscape provisions without exceeding the traffic capacity of the proposed circulation improvements. There are areas in which the height limit varies from prevailing provisions, calling for both lower and taller height recommendations, due to program requirements, environmental management objectives, or physical form and appearance objectives. These variances include the following:

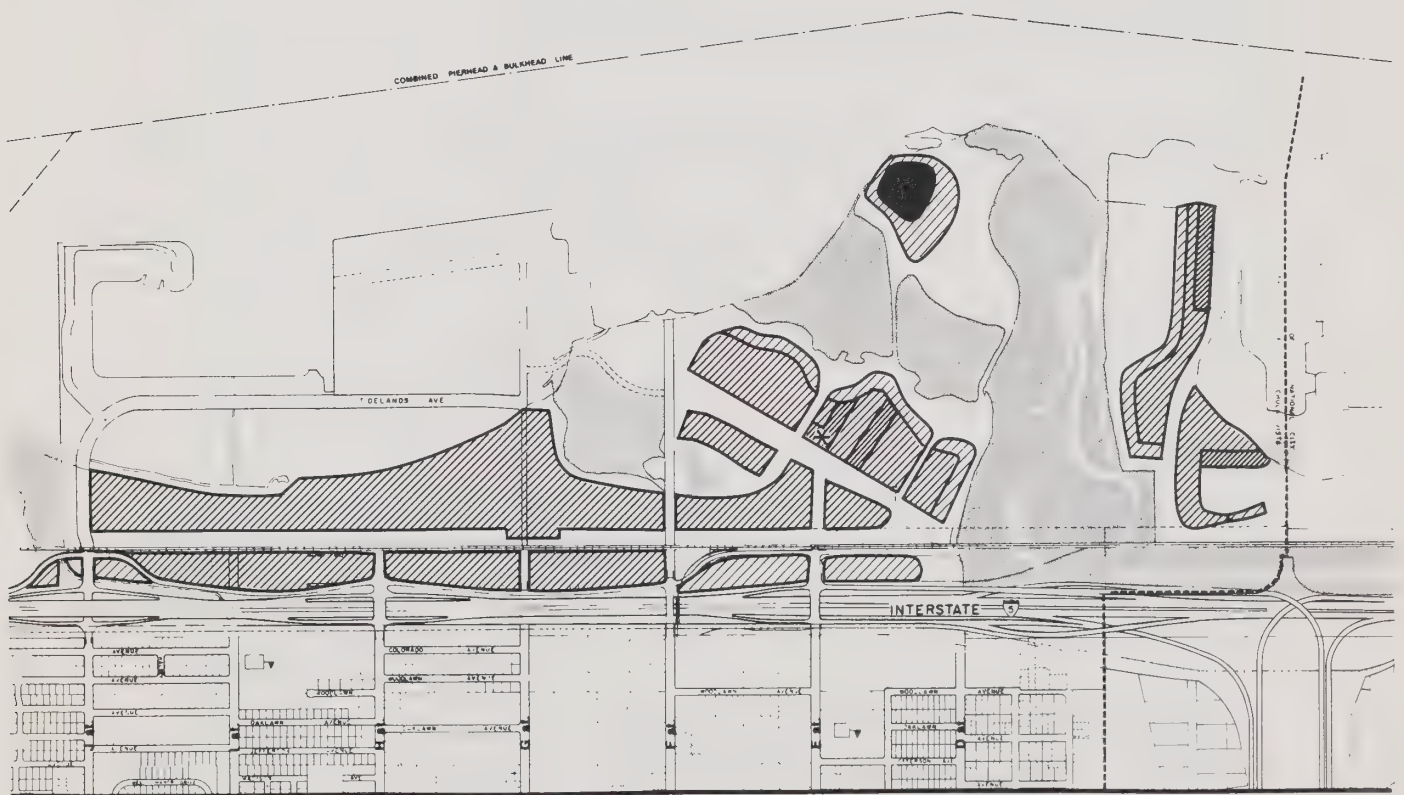
Gateways. To achieve a "gateway," or sense of entry to the Bayfront and relate it to the existing new development along Bayfront Boulevard, the areas immediately adjacent to the E Street and J Street bridges are recommended to stay between one and two stories.

Gunpowder Point Hotel. The permitted height of the hotel structure is six to eight stories. Up to twelve stories will be permitted conditionally if substantial public open space amenities are included in the development program. (See also Environmental Management section and Form and Appearance section.)

Office Park Focus. Taller structures are encouraged in order to provide a clear center of focus for the office park complex, to identify the location of the specialty retail center serving the entire Bayfront, and to frame a directed view to the water's edge after arriving at the E Street gateway. This gateway location is indicated on Figure 5. (See also Chapter IV, Subarea Specific Design and Development Guidelines.)

D Street Fill. There are two areas on the D Street Fill where it is desirable to permit taller structures. At the northwestern end of the Bayfront, adjacent to the proposed new roadway, up to five stories will be permitted. The increased height will (1) emphasize the built-up gradient to the marsh edge at the southern perimeter; (2) permit a mixed-use development along the roadway frontage with commercial uses on the ground floor and residential development above; and (3) emphasize this location as a destination.

At the eastern end of the D Street Fill, facing the proposed marina development, up to five stories will be permitted. The increased height will (1) permit a mixed use development along the marina frontage with commercial uses on the ground floor and residential development above; and (2) provide a focal point for pedestrian activity by strengthening the spatial definition of the marina edge.



-  2 Story Maximum
-  4 Story Maximum
-  5 Story Maximum
-  * Special Condition (see text)
-  8 Story Maximum
(12 story conditional-see text)

FIGURE 5
**CHULA VISTA
 LOCAL COASTAL PROGRAM
 RECOMMENDED
 BUILDING HEIGHTS**



0' 1200'

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2. Permitted Intensity. The proposed development intensity for the Bayfront is shown in Table 2. Generally, the permitted building heights, parking standards, and traffic capacity will determine the permitted intensity. For residential development, the permitted intensity is expressed as the number of dwelling units per net acre, exclusive of the major roadways and public open space requirements provided for in the Plan. There is both a minimum intensity and a maximum intensity established for projects within the Bayfront. The minimum density is established to assure sufficient levels of development to protect the expected public investment in infrastructure and to guarantee an ultimate neighborhood of sufficient size to achieve a viable identity for the residents of this community.

For commercial uses the office park development is limited to a maximum floor area ratio (FAR) of 0.5. The expected development intensity for other commercial uses is generally a FAR of 0.25 resulting from limitations in permitted height and adequate provisions for parking. The permitted intensity for the hotel is a FAR of 0.5 calculated for only the building envelope of 14 acres on Gunpowder Point.

TABLE 2: PROPOSED DEVELOPMENT INTENSITY

	DEVELOPABLE ACRES	DEVELOPMENT INTENSITY
Subarea I—D Street Fill	73.5	
Residential	19.0	15 to 30 du/acre
Development Reserve ¹	13.4	FAR 0.5 or 15 to 30 du/acre
Commercial—Marine-Related	1.7	FAR 0.25
Commercial—Marina ²	±6.0	NA
Subarea II—Gunpowder Point	40.8	
Commercial—Hotel/Conference	14.0 ³	FAR 0.5 ³
Subarea III—Midbayfront	109.6	
Residential	18.1	15 to 30 du/acre
Development Reserve ¹	8.6	FAR 0.5 or 15 to 30 du/acre
Commercial—Office/Park and Specialty Retail	48.0	FAR 0.5
Commercial—Highway-Related	20.3	FAR 0.25
Landscaped Parking		Bonus Provisions ⁴
Subarea IV—Industrial Area	26.2	
Commercial—Highway-Related	3.1	FAR 0.25
Industrial/Utilities	14.2	Per Existing Zoning ⁵
Landscaped Parking	8.9	Bonus Provisions ⁴
Subarea VI—Outparcels	18.8	
Industrial	18.8	Per Existing Zoning ⁵

Notes To Table 2:

du/acre = Dwelling units per net acre of developable land.

FAR = Floor area ratio or ratio of gross building area to net developable land area.

NA = Not applicable.

¹Development Reserve: Permitted land use allows for flexibility in response to future market conditions.

²Marina: An allowance of approximately 6.0 acres site is made for a recreational boating marina or a small commercial marina repair and storage facility. This area does not include upland support facilities covered by the marine commercial designation.

³26.8 acres of upland area are excluded for purposes of establishing permitted FAR.

⁴Bonus Provisions: Increased development is proposed on parcels adjacent to the areas where long term provisions are secured to utilize the ROW for parking and parking areas are landscaped per prevailing standards.

⁵Existing Zoning: Intensity of use does not vary from existing Chula Vista zoning code.

CIRCULATION AND PUBLIC ACCESS

The circulation improvements to serve the Bayfront result from a number of basic objectives, including convenient access, natural habitat protection, traffic capacity constraints, proposed regional-serving improvements, which are incorporated into the Caltrans project for the Interstate 5 and 54 interchange, and the potential trolley station project east of I-5 at E Street.

EXISTING CIRCULATION

The entries to the Bayfront are limited by the off-ramp configuration of Interstate 5 and the location of wetland resources. The proposed new development is concentrated in the Midbayfront and the D Street Fill. At the present time access is available at E Street, H Street, and J Street. One additional bridge at F Street provides for a connection to the east side of the Freeway but no freeway connection is available.

Because of its location, the H Street ramps primarily serve the Rohr Corporation, and the J Street ramps serve the marina and Port lands westerly of Rohr. While J Street serves as an important southerly termination of Tidelands Avenue, E Street will function as the primary gateway to the Bayfront.

At the present time, there is no vehicular access to the D Street Fill area. Off-road vehicles utilize this portion of the Bayfront arriving via National City or the areas adjacent to the railroad levee. When the Sweetwater channel is completed by the Corps of Engineers, access via National City will be cut off.

Tidelands Avenue has been improved from the intersection with Bay Boulevard at J Street to the north end of the J Street marina. It has been constructed as a divided roadway with a landscaped median. Bay Boulevard also has been recently improved as a frontage road serving the areas easterly of the AT & SF railroad. The improved portions extend from L Street to E Street.

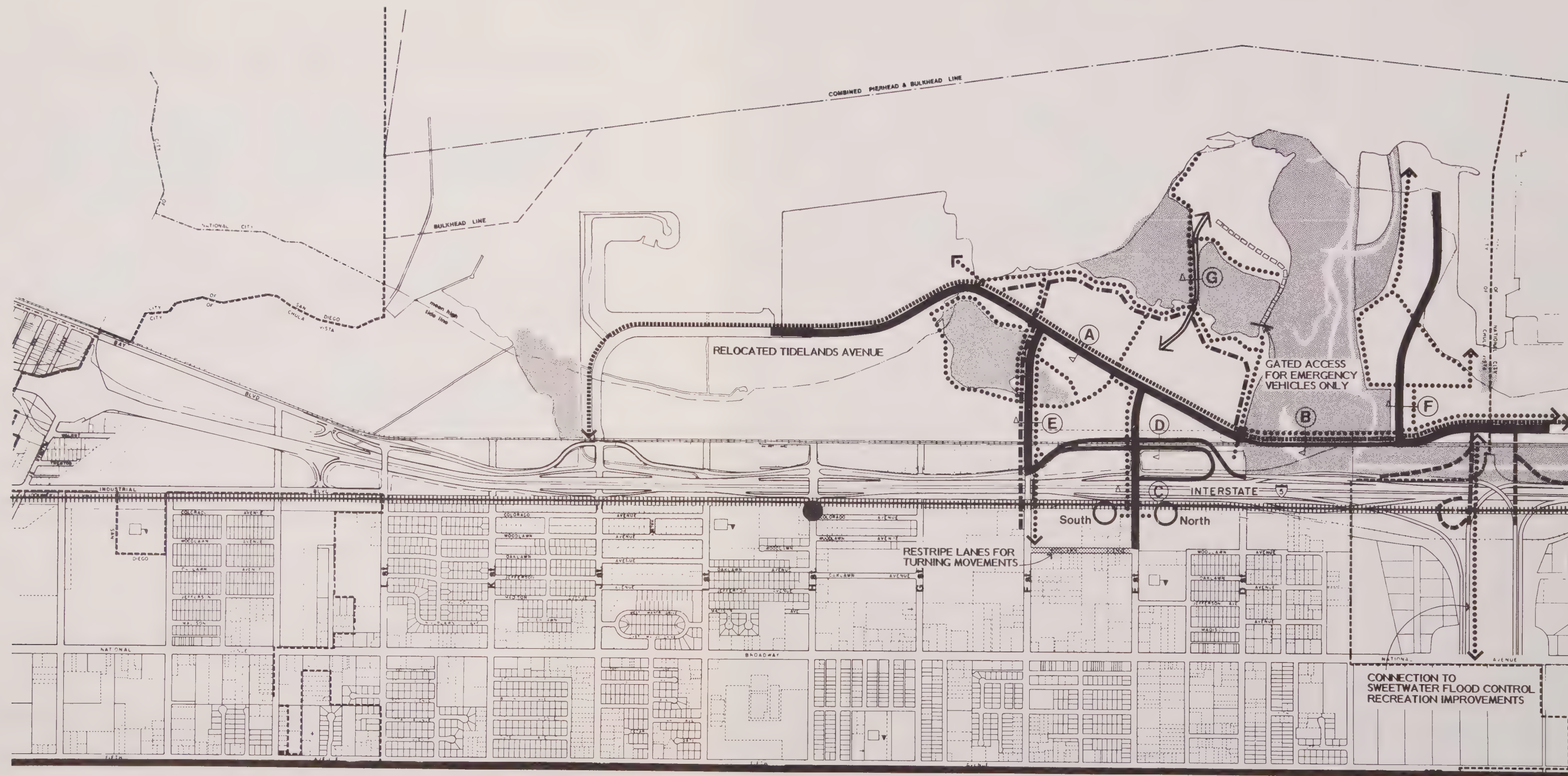
The San Diego Trolley operates on the railroad right-of-way on the east side of I-5. One station adjacent to the Bayfront at H Street is developed as a park and ride lot.

Caltrans proposes to construct a new interchange between I-5 and Route 54 as a joint project with the Corps of Engineers Sweetwater Flood Control Project. The freeway improvements include an interchange, transition roads, and the widening from three lanes to four lanes of a short segment of I-5 between the interchange and E Street.

BASIC CIRCULATION OBJECTIVES

A series of general objectives are provided as guidelines for future circulation facilities and services. These are amplified in specific circulation improvements for roadways, transit, parking, and pedestrian and bicycle routes.

1. Provide good regional access to the Bayfront from Interstate 5 and provide for future connections directly to Route 54.
2. Route and design roadways in a manner which minimizes adverse affects on valuable marshlands, protects lands with high recreation value, and avoids fragmentation of developable lands into inadequately sized or located parcels.
3. Create auto-free zones along the shoreline and other areas which have unique environmental conditions or potential, and make provision for pedestrians and bicyclists.
4. Reduce dependency upon the private automobile by providing for complementary public transit service, including smaller "mini-transit" vehicles or private jitneys.
5. Develop the network of transportation facilities, including freeways, major arterials, parking areas, and pedestrian and bicycle paths, into a system in which there is convenient transfer from one mode to another. An easily understood relationship between the various parts of the transportation system and the major destinations within the Bayfront should exist.
6. Avoid congestion of the freeways and connection arterials by maintaining a mix of land uses where peak traffic generating periods are staggered throughout the day.
7. Provide motorists, both on freeways and on arterials within and adjoining the Bayfront, with enjoyable scenic experiences.
8. Provide for convenient pedestrian, bicycle, and vehicular access to the Bayfront from community areas east of Interstate 5.
9. Provide sufficient separation between pedestrian ways, bicycle paths, and roadways to ensure traffic safety and the elimination of noise, functional disruption, and visual intrusion caused by motor vehicles.



- Existing Trolley Line
- Existing Trolley Stop
- New Roadway
- Controlled Access Roadway
- Emergency Access Roadway

- Future Trolley Station (alternative locations)
- Regional Bicycle Route
- Local Bicycle Route
- Pedestrian Route
- Future Freeway Connection

Typical Roadway Section

FIGURE 6 CHULA VISTA LOCAL COASTAL PROGRAM CIRCULATION ELEMENT



0' 1200'

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More detailed applications of these general objectives are graphically shown in Figure 6, the Circulation Map, and are described below in the discussion of specific circulation components.

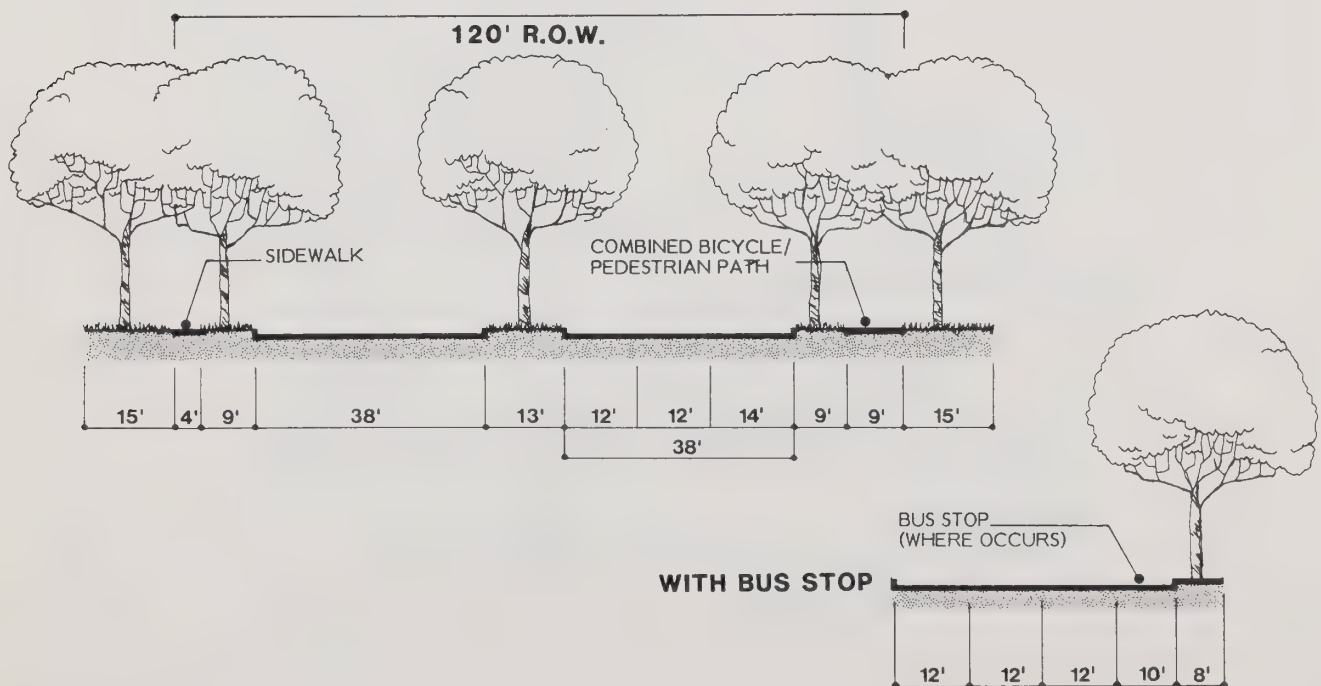
Recognition must be given to the fact that the proposed improvements along with diagrams are schematic and typical. Additional engineering analysis and environmental reviews, and coordination with Caltrans, National City, and the Unified Port District will be required during the design phases of these projects. The implementation phase for the Local Coastal Plan will provide details of how the coordination will be accomplished.

ROADWAYS

1. Tidelands Avenue. Tidelands Avenue will be extended from its presently improved terminus at the north edge of the J Street marina to provide a continuous Bayfront parkway into National City. To maintain traffic capacity and create a parkway character for Tidelands Avenue, no curbside parking will be permitted. Specific segments of the extension of Tidelands Avenue will be designed and constructed to protect significant environmental resources:

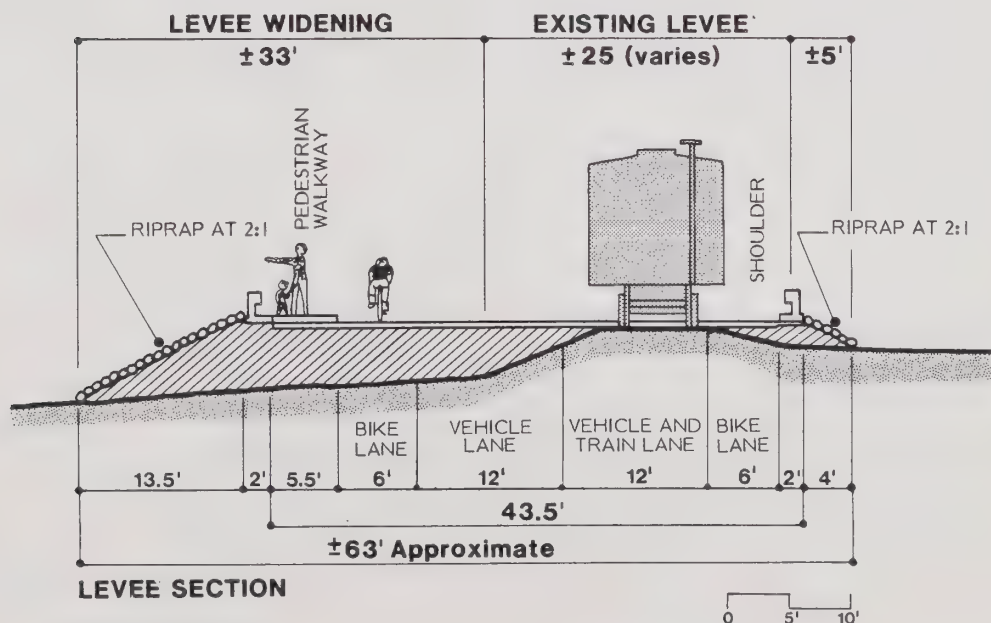
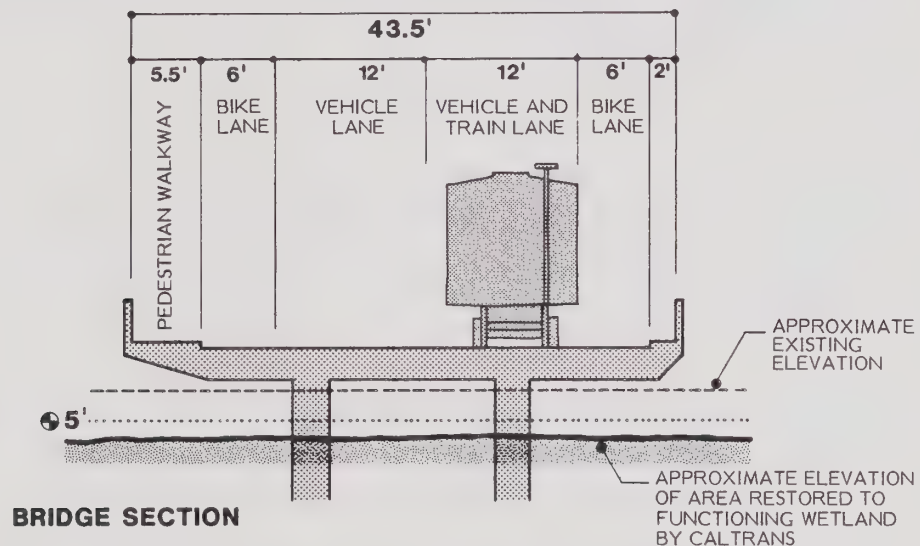
F-G Marsh Area. The alignment of Tidelands Avenue within the Port District's property will move westerly to by-pass the present edge of the existing F-G Marsh. This relocation of the right-of-way will (1) completely by-pass the F-G Marsh; and (2) introduce major views of the waterfront from the moving automobile.

Midbayfront Parkway. The central portion of Tidelands Avenue will be developed as a landscaped parkway with parkway and median planting. This will provide a substantial scenic improvement and a strong visual element to organize physical development in the Bayfront. (See Section A.)



SECTION A TIDELANDS AVENUE - 3 Lane Segment

Sweetwater Marsh Crossing. The crossing of the Sweetwater Marsh will occur on a combination of existing levee and viaduct bridging of the wetland. Tidelands Avenue will be located on the existing SDA & E railroad levee that presently crosses the marsh. In order to accommodate the infrequent railroad use of the right-of-way, the tracks will be incorporated into one of the the automobile traffic lanes. (See section B.)

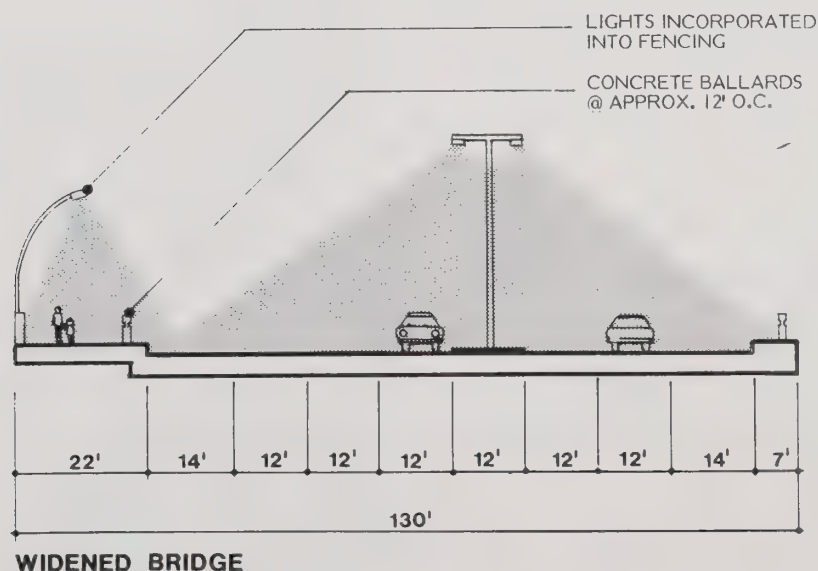
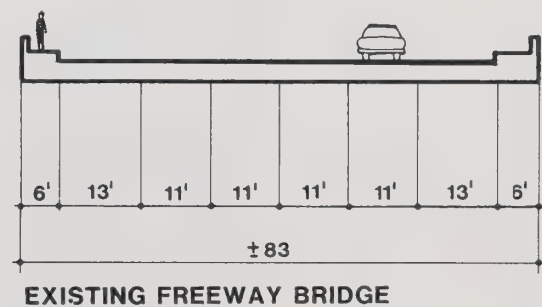


SECTION B
RAILROAD/TIDELANDS AVE. CROSSING OF
SWEETWATER MARSH

Sweetwater Channel Crossing. The crossing of the Sweetwater Channel will occur at a high bridge adjacent to the railroad right-of-way. In this way Tidelands Avenue will (1) connect to the proposed street improvements in National City at this location; and (2) permit the future connection of additional transition roads on piers that would link Route 54 to Tidelands Avenue.

2. E Street Bridge and Freeway Ramps. In order to accommodate the proposed development in the Bayfront, it was found that the E Street bridge would need to be widened from its present six lane configuration to seven to nine lanes. (See Figure 7.) This widening would include improvements at the Bay Boulevard intersection to eliminate a left turn movement on the south bound freeway ramp. Specific improvements to the bridge, the transition to the bridge, and the freeway ramps are proposed to mitigate the traffic impacts:

Bridge Widening. The number of lanes on the E Street bridge over I-5 is the most critical element in the traffic system. In all options evaluated for mitigating traffic impacts, some widening of the existing bridge was found to be necessary (see Section C). However, there are possibilities of improving traffic operation on the existing bridge through restriping to change the lane arrangement (adding more left turn capacity), so that widening of the bridge could be coordinated with the phasing of development.



SECTION C FREEWAY BRIDGE WIDENING AT E STREET

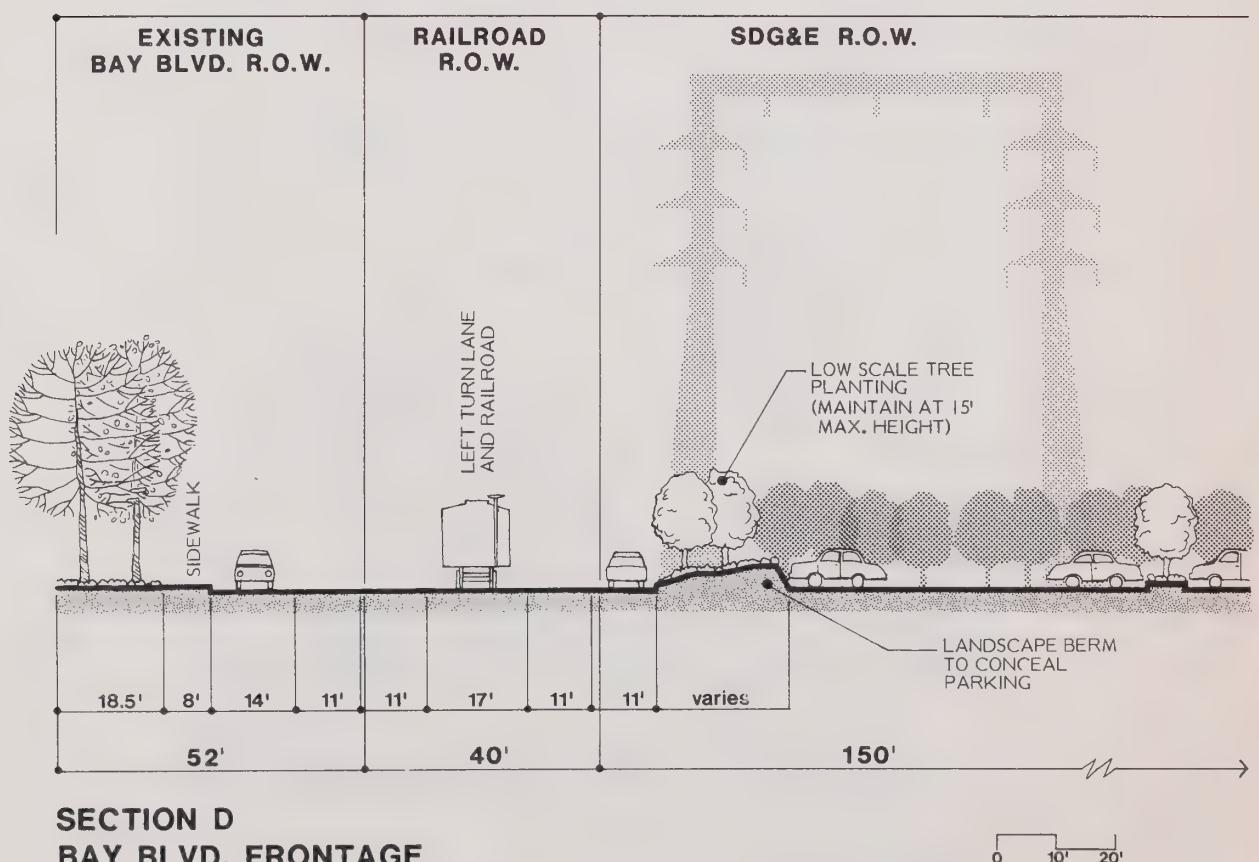


The analyses provided in the alternatives assessment¹, indicate that nine lanes would be needed on the E Street bridge with the full diamond interchange configuration that presently exists, two left turn lanes for each direction; plus three through lanes eastbound and two through lanes westbound.

However, adding a loop ramp in the northwest quadrant of the interchange would reduce the required number of bridge lanes to seven. The intersection of E Street and Bay Boulevard would then become more critical, and additional design and traffic control measures would be needed to reduce those problems if the loop-type interchange improvement were to be adopted. The loop probably would not be appropriate unless the proposed Route 54 connections to the D Street Fill area were to be ultimately provided.

In addition to the roadway improvements, a major pedestrian right-of-way is proposed to connect the Bayfront to a proposed new trolley station at E Street. A minimum of a 20 foot clear sidewalk section is recommended, separated from the roadway with bollards.

Bay Boulevard Connectors and the Freeway Ramps. Two options for providing a loop on-ramp on the west side of I-5 have been developed and an additional option showing a variation in the approach east of I-5. (See Figure 7.) The preferred option requires improvements at Bay Boulevard as indicated in Section D.



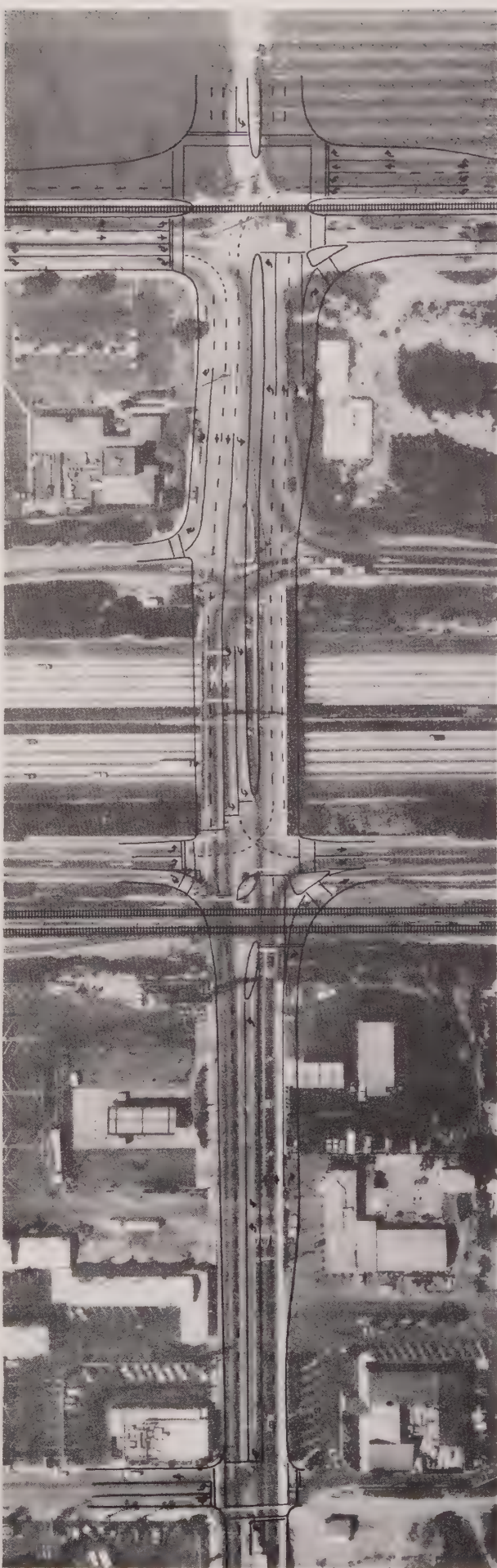
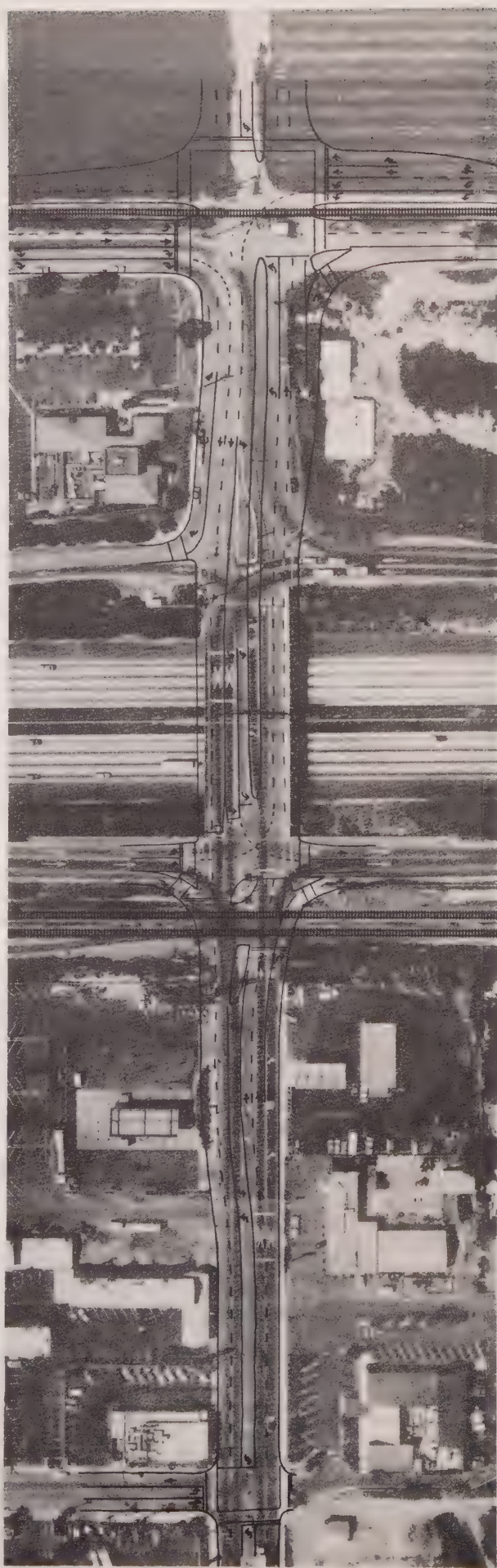
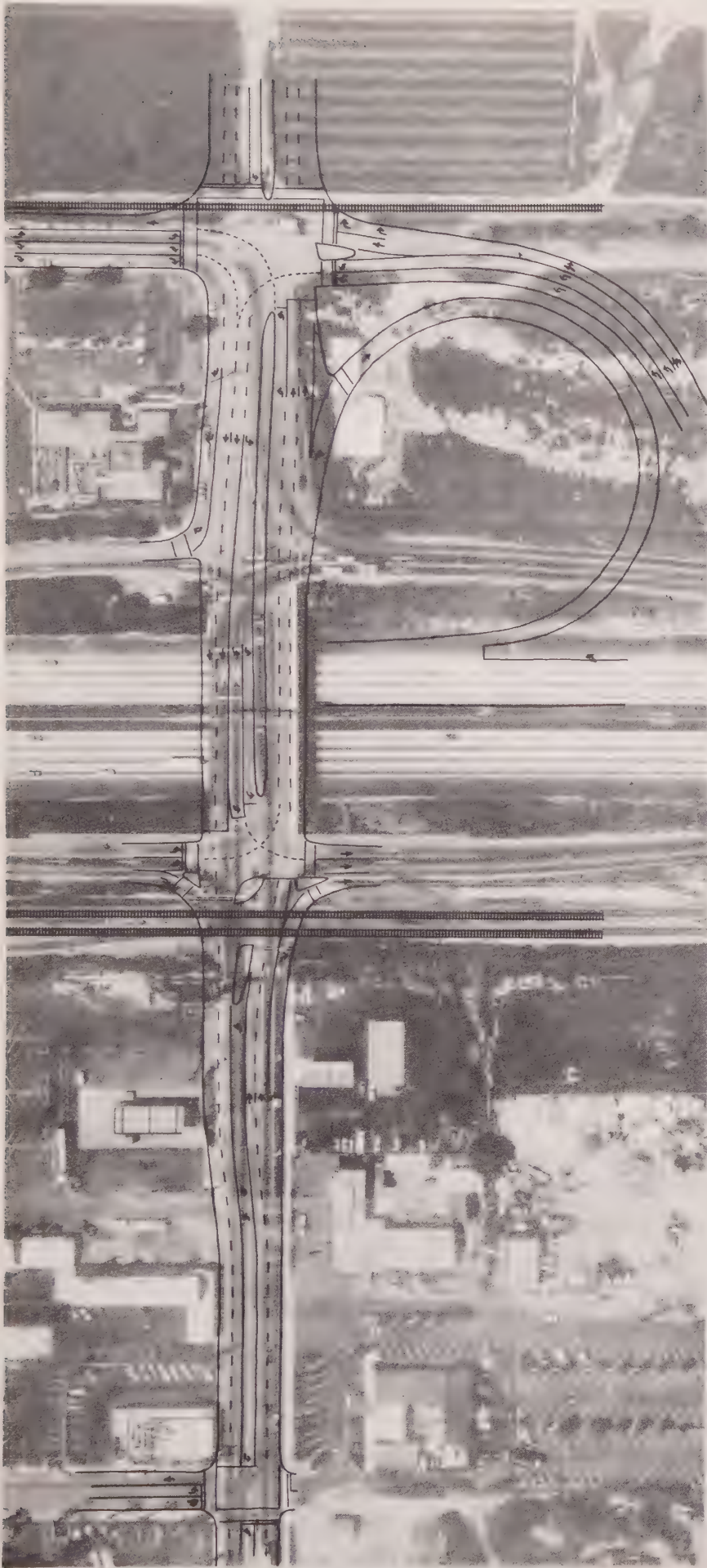
¹ Sedway Cooke Associates, July 1983.

Figure 7
E-STREET BRIDGE WIDENING
AND APPROACH MODIFICATIONS

Option 1

CLOVERLEAF

Showing South Side Trolley Alternative



Option 1

Option 2

Option 3

Option 2 (preferred)

BAY BOULEVARD GATEWAY

With South Side Trolley Alternative

Option 3

BAY BOULEVARD GATEWAY

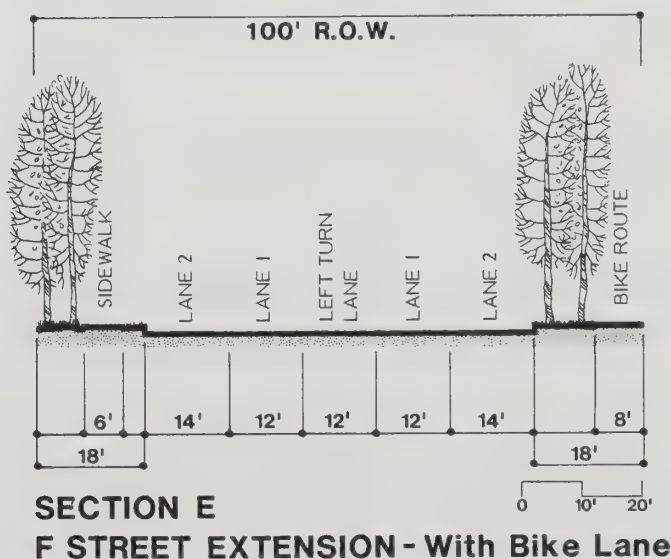
With North Side Trolley Alternative

The tight loop, Option One, provides a direct south bound connection to the freeway without requiring a left hand turn across opposing west bound traffic. This configuration, however, requires a substantial amount of land for the ramp right-of-way and makes the remaining portion of the parcel north and west of this intersection accessible only from Tidelands Avenue across the railroad tracks.

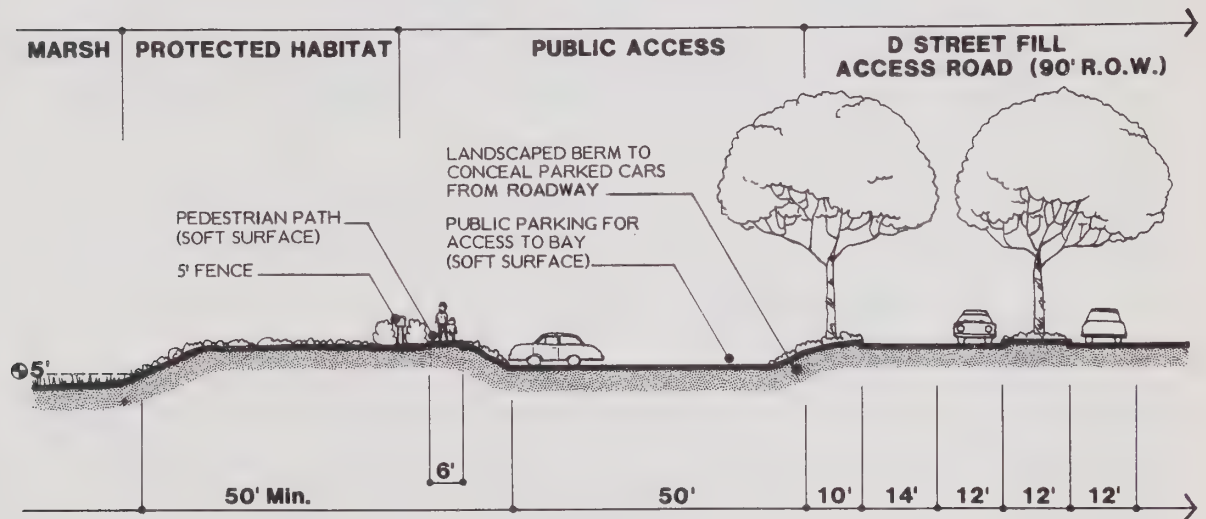
Option Two, the preferred option, shows the improved intersection at Bay Boulevard with an extended loop as indicated in the Circulation Map, Figure 6. With this configuration: (1) less land is required for the right-of-way; (2) the freeway frontage parcel is accessible from Bay Boulevard; (3) the extended ramp would reduce the number of critical intersections in the E Street interchange area from three to two; and (4) the E Street approach to the Bayfront would be substantially simplified. This option is shown in cross section D illustrating the relationship to the railroad and power line lattice structure.

A third option is shown to illustrate the differences in the approach to E Street which are possible east of I-5 to coordinate the improvements with the proposed trolley site either north or south of E Street. With either of two possible future station locations being presently evaluated, the major E Street widening can be limited to just one side. (See options in Figure 7.)

3. F Street Extension. F Street will function as an important internal circulation element in the Bayfront and provide a critical secondary outlet from the Bayfront to the east side of the freeway. Extending it all the way to intersect with Tidelands Avenue will permit the maximum flexibility for providing area-serving bus loops through the Bayfront that connect to the regional-serving trolley system. It will also provide for necessary service loops for underground utilities. The road will also function as a major pedestrian route to the city and provide a direct bicycle connection from the residential areas east of I-5 with the regional bicycle trail. The proposed roadway configuration is illustrated in section E.

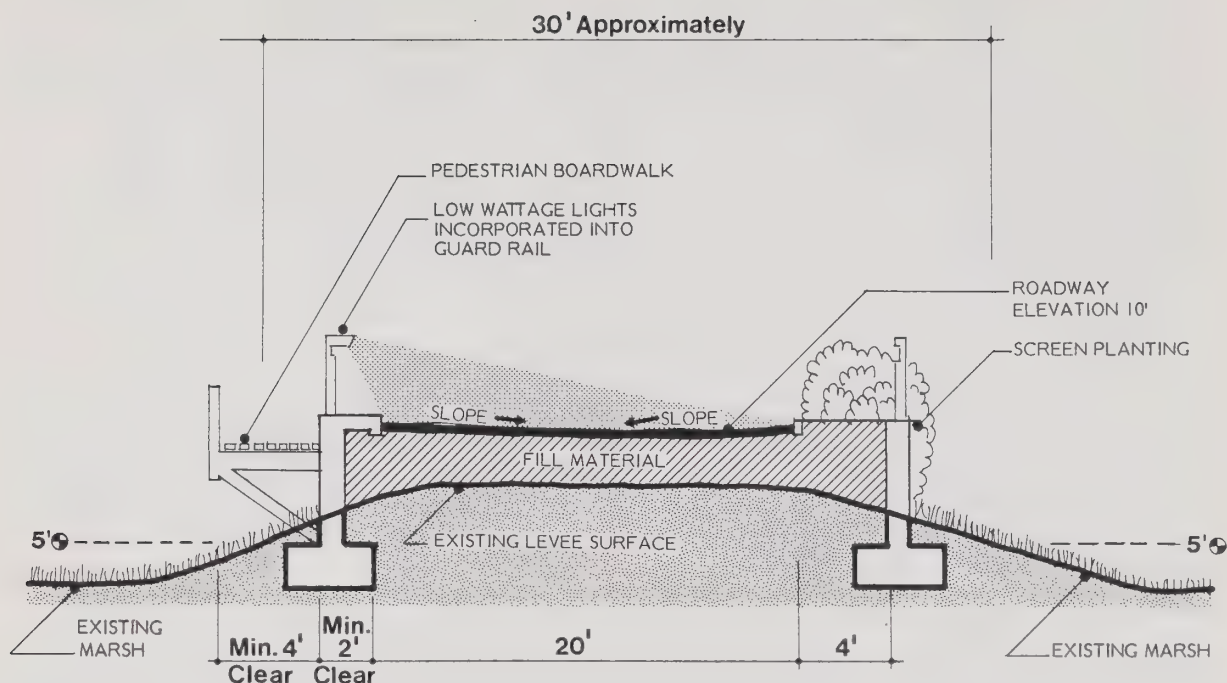


4. D Street Extension from Tidelands Avenue. The proposed extension will run adjacent to the 100 foot wetland buffer, providing major views to the Sweetwater Marsh. Pedestrian movement is concentrated on the north side of the roadway adjacent of the proposed marina development. Parking for public parks and open space will be provided in depressed lots screened by landscaped earth berms. (See Section F.)



SECTION F
GATEWAY TO D STREET FILL

5. Access to Gunpowder Point. Access to Gunpowder Point is a key element of the Circulation Plan. The link between the hotel/conference facility on the Point and the rest of the Bayfront is via two existing levees. The main access will be on the southern levee. In order minimally to disrupt wildlife using the adjacent wetlands, a 20 foot wide controlled access roadway is proposed on the southern levee. As shown in Section G, the two lane road can be integrated into the levee without undue impact on the adjacent marshes. In order to raise the roadbed above the 10 foot elevation, structural reinforcement will be provided or some equivalent reinforced sloped embankment that minimizes impact on wetland resources. A boardwalk is included as part of the roadway section to provide pedestrian access to Gunpowder Point on the side of the levee adjacent to the E Street Marsh side. Bicycle access to Gunpowder Point can be accommodated either by permitting bicycling on the roadway or the walking of bicycles along the pedestrian boardwalk. In addition, screen planting is proposed to reduce the impact on Vener Pond from automobile traffic and to shield the wetlands from the street lighting incorporated into the guard rail.



SECTION G
ACCESS TO GUNPOWDER POINT

0' 2' 4' 6'

A secondary access to Gunpowder Point is proposed only as an emergency route with a crash gate located on the levee as shown in the Circulation Map, Figure 6. The proposed improvements for this emergency road provide for a soft-surfaced road bed and a bridge structure over the breached section of the levee. No changes in the tidal interaction between the pond and Sweetwater Marsh are envisioned.

6. Future Freeway Connection. As the Bayfront develops, additional traffic improvements will have to be provided. The most noteworthy improvement calls for the future connection to the I-5/Route 54 interchange. This will achieve the regional access necessary to serve the Bayfront development and relieve the traffic impact on the E Street/Bay Boulevard intersection. The right-of-way for the off-ramps is provided in the approved Caltrans/Corps Certificate of Consistency and is also included in the proposed National City Local Coastal Plan.

TRANSIT

There are three major transit improvements recommended for the Bayfront. They are (1) the provision of a second trolley stop in the Bayfront area; (2) the provision of future bus service to interconnect the Bayfront with the trolley station; and (3) to encourage the development of privately supported jitneys serving concentrated employment centers such as Rohr Corporation and the proposed destination resort hotel/conference facility.

1. E Street Trolley Station. The County of San Diego is currently studying the feasibility of adding a trolley station to the regional serving light-rail system at E

Street. The assessment will determine the preferred station location, provide a detailed bus plan for integration of the station into the Chula Vista Transit System, and identify major impacts, costs, and benefits from the addition of the station. The Bayfront Plan recognizes the future connection to the trolley system as a significant benefit to the feasibility of development in the Bayfront. It is recommended that opportunities for interconnecting the Bayfront with the proposed trolley station should be included in the Plan. These opportunities include:

Bus Improvements. Provide for convenient bus stop locations on convenient travel loops within the Bayfront and at areas of concentrated activity.

Pedestrian Access. Provide for convenient, direct pedestrian access from the Bayfront to the new station. (See Section C.)

2. Bus Service. The Land Use Plan provides for roadway right-of-ways with sufficient capacity and opportunities for bus stop locations to facilitate convenient bus service into the Bayfront along Tidelands Avenue, E Street, F Street, and Bay Boulevard. This capacity should be maintained to provide the greatest flexibility in the routing of future bus service into the Bayfront and to achieve an effective connection to the trolley system.

3. Private Transit. The concentrations of land use activity provide opportunities for convenient private jitney service to supplement more regular transit service. Where it is determined that private service will not compete with public services, the Plan provides that jitney-type services be encouraged in the private sector.

PARKING

Parking will generally be incorporated into the private development in the Bayfront with some public parking to serve the community parks and other open space resources. While the required amount of parking will be established by current City standards for each land use, additional parking provisions will ensure the protection of the natural environmental and visual resources.

1. Gunpowder Point. In order to provide sufficient parking convenient to the hotel conference center, the Plan provides that up to 220 surface parking spaces will be directly located on Gunpowder Point. The parking will be consolidated into an area hidden from view by landscaped berms. Additional parking spaces will be provided either in a structure over the surface parking, beneath the tennis courts or remotely located in the Midbayfront. In order to minimize the traffic across the south levee road to the Point, shuttle/valet service to the hotel will be encouraged connecting the complex to remote parking facilities in the Midbayfront. (See also Chapter IV, Subarea Site Specific Development and Design Provisions.)

2. Street Parking. In order to maintain views from the major roadways to the shoreline and major development sites, street side parking will not be permitted along any of the major roadways identified in the Circulation Plan including Tidelands Avenue, D Street, E Street, F Street or Bay Boulevard.

3. On-site Project Parking. Parking included as part of private development shall provide for the following:

Location. Parking shall be located in areas away from the shoreline and public open space corridors.

Screening. Where feasible, parking will be screened from view from the major arterials by the use of landscaped berms and tree planting.

Type. Where possible, large scale parking will be avoided in favor of smaller disaggregated parking areas separated by buildings or landscaping.

4. Landscaped Parking in the SDG & E Row. Where parking is incorporated into the SDG & E Row through the use of the bonus provisions of the plan, the parking areas shall be landscaped with a continuous perimeter planting of trees and ground covers. The tree planting will be tightly spaced to provide a dense canopy at eye level. Tree species will be limited to those that will not interfere with the overhead power lines and trimmed as necessary to meet standards by SDG & E.

5. Community Park Parking. Public parking areas will be provided at each of the major community or neighborhood parks adjacent to a major roadway, as shown in Figure 4. The parking areas will be incorporated into the open space areas in close proximity to the roadways and where possible screened from view. With the exception of Gunpowder Point, for which no parking is required, one parking place for every 10,000 square feet of accessible open space will be provided.

PEDESTRIAN AND BICYCLE ROUTES

The major pedestrian circulation routes and a regional bicycle route are included in the Circulation Map, Figure 6. The provision of these routes will guarantee significant public access to the waterfront and within the Bayfront development. The provisions of the Plan will result in a dramatic increase in both the quantity and quality of available public access. The specific components of this public access are described below.

1. Pedestrian Access to the Shoreline. Continuous shoreline access is provided within the 100 foot upland area designated as the wetland buffers in the Environmental Management section of the Plan. It is envisioned that a continuous improved public path will be provided that is integrated into minor landscape improvements to the wetland buffers. The combination of landscape screening and out-looks adjacent to the wetlands will provide major recreational opportunities without undue impact on the wildlife resources. (See Environmental Management section.)

2. Pedestrian Access to Gunpowder Point. Pedestrian access will be provided along the southern levee from the Midbayfront to Gunpowder Point through a controlled access roadway. (See section F.) The access will permit pedestrians and bicyclists to utilize the southern and eastern edges of Gunpowder Point as shown in the Circulation Map, Figure 6.

3. Continuity with Other Pedestrian Routes. In order to provide continuity with adjacent planning areas, pedestrian shoreline access is proposed to interconnect with other existing or potential circulation routes. Ongoing planning and coordination provide for:

Connection to Port Lands. At the D Street Fill area and at the J Street Marina Park area, public access will be integrated with Port land development. This will result in a continuous public access route with intermittent exposure to the water edge in the Port lands. This provision recognizes the need for continuity in circulation but also the need to maintain flexibility in land use development options for Port lands so

that unwarranted pedestrian circulation does not interfere in the functional operations of water-related development.

Connection with Caltrans/Corps Project. Pedestrian and bicycle routes in the Bayfront will interconnect with the proposed recreational improvements included in the Caltrans/Corps of Engineers project. It is recommended that the flood control project anticipate this interconnection and provide for the necessary bridges or other structures.

Connection with Chula Vista Neighborhoods. Pedestrian routes will interconnect major open spaces in the Bayfront to adjacent city neighborhoods via E Street and F Street.

4. Bicycle Routes. The Circulation Map, Figure 6, indicates a continuous shoreline bicycle route to be a part of the statewide system. The route will connect via Tidelands Avenue to National City to the north and to Bay Boulevard at J Street to the south. (Section B illustrates the bicycle route incorporated into the Sweetwater Marsh crossing. The Environmental Management provisions of the Land Use Plan illustrate the location of the bicycle route within the 100 foot wetland buffer adjacent to wetlands.) Additionally joint pedestrian and bicycle use of the Gunpowder Point paths is permitted.

C. UTILITIES AND AREAWIDE GRADING

The utility improvements proposed to serve the Bayfront are interrelated to provide the most cost-effective means for servicing the developable areas. Extension of existing utilities and upgrading in mainline sizes is required for water and sewer. Additionally, electrical service, telephone, and gas services will be provided but are not included on the schematic Utilities System Map. Grading and drainage concepts are incorporated into the street plans to utilize the streets in the storm water collection system. Building pad grades and generalized design grades for streets are designated to ensure protection from concurrent storm and high tide events and to provide sufficient cover over underground utilities.

EXISTING SOILS AND GEOLOGY

Surface and sub-surface conditions vary throughout the Bayfront. Portions of the site consist of original dry uplands. Within these areas, no difficult or unusual land development problems are anticipated for standard building construction. However, in the balance of the area, settlement hazards exist.

The settlement hazards are attributable to the presence of relatively shallow surficial deposits of soft compressible bay mud throughout the historic marsh lands and the tidal flats, as well as in deeper water areas. This mud, an organic silty clay, has an almost liquid consistency and makes a poor foundation material. It tends to ooze out from beneath heavy loads or, when confined, to compress over a period of years under the weight of fill or structures. Within the study area the thickness of this mud layer is typically between 5 and 10 feet, but it can be found in thicknesses up to 20 feet. There appears little correlation between mud thickness and distance from shoreline. Mud thicknesses of 8 feet are common one mile from shore, while deposits up to 17 feet thick were found in the recently filled J Street marina area. Mud thickness tends to be highly variable near the shoreline. This fact makes near-

shore land development particularly difficult since the irregular settlement associated with such deposits is detrimental to structures and utilities.

Two major faults have been mapped near the Chula Vista waterfront area: the north-northwest trending Rose Canyon/San Diego Bay/Tijuana fault, and the east-west Otay fault. Although the exact trace of each is not known, the San Diego Bay/Tijuana fault alignment is probably situated approximately in the center of the Bay, about one mile west of the Chula Vista waterfront. The Otay fault is thought to underlie alluvial fill in the Otay River valley approximately three miles south of the Chula Vista waterfront. There is no evidence that indicates the San Diego Bay/Tijuana fault system is presently active, although it has apparently undergone repeated movement within the last 100,000 years. While there is little reason to expect additional movements along this fault within the usual economic life of most engineering projects (50 to 100 years), the possibility of renewed activity cannot be disregarded in evaluating the safety of critical structures such as power plants, public assembly buildings, etc. The probable effect of renewed activity along the San Diego Bay/Tijuana or other nearby faults would be moderate to severe ground shaking, with surface rupture on the Chula Vista site unlikely.

The planning implications of these soils and geologic conditions relate to public safety and the economics of development. There is the possibility of soil liquefaction during a severe earthquake. This is of special concern in tideland areas reclaimed by hydraulically-placed fills. Extensive evaluations of the soil conditions have been made. However a detailed evaluation of liquefaction should be routinely made for any future major Bayshore engineering project. With the exception of original Upland areas, geotechnical conditions will have a major effect on site and building construction costs due to foundation and seismic problems.

EXISTING UTILITY AND ROADWAY IMPROVEMENTS

The northern portion of the Chula Vista Bayfront (north of G Street) is primarily farmland at this time. Utilities have been stubbed to the boundaries of the site and a major sewer line passes along the western edge of the property. Most of the utility lines are at the edge of a utility district and lack a complete network to provide sewer and water service to initial projects without looping utilities or building offsite improvements.

Tidelands Avenue, a major highway, has been constructed from J Street at Interstate 5 westerly and northerly to the north end of Rohr Industries (at the prolongation of G Street). The majority of that street, together with the recently completed J Street Marina and RV Park, are on Unified Port District property.

The north limit of the Bayfront Plan area is the National City boundary line. It is also the planned extension of the Sweetwater River channel which will be realigned during planned construction of Route 54 by Caltrans.

BASIC UTILITY SERVICE AND GRADING OBJECTIVES

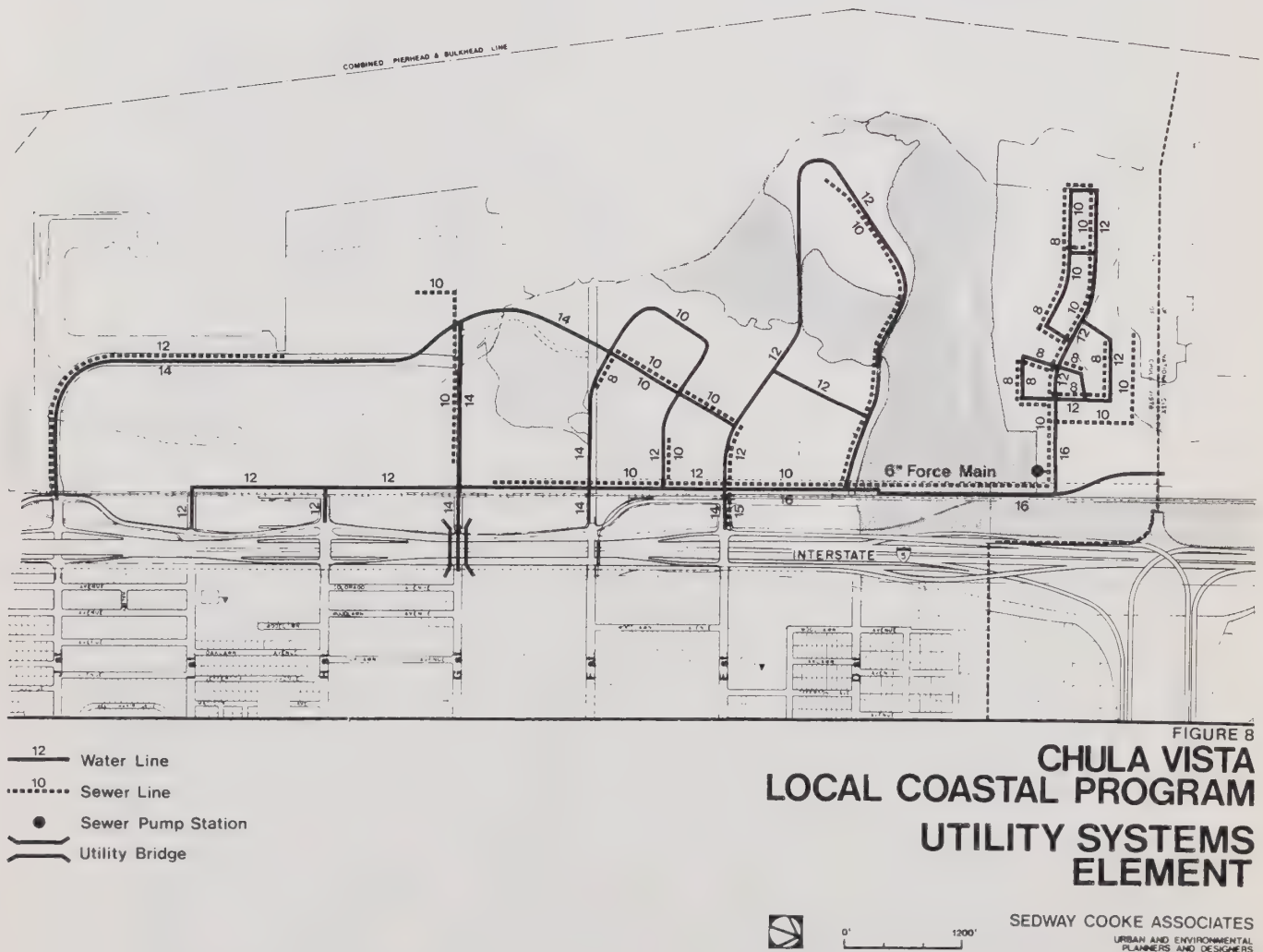
The following general objectives are proposed to guide the future design and implementation of utility services and areawide grading:

1. Provide adequate sizing of utility lines to assure sufficient capacity for the most intensive users.

2. Minimize the import of soil to that necessary for the protection of developable areas from flooding during concurrent design storms and high tide conditions.
3. Protect existing natural resources from undue impact during the construction phases.
4. Provide for an adequate on-site storm drainage system to preclude drainage directly into wetland habitat without adequate filtering of sediments or trapping of pollutants.

PROPOSED UTILITY SYSTEMS

Figure 8 illustrates the schematic water and sewer systems to serve the proposed development.



1. Proposed Water Service. The project is served water by the Sweetwater Authority which obtains water from local reservoirs and purchases from the San Diego County Water Authority (SDCWA). The SDCWA is furnished water by Metropolitan Water District of Southern California via aqueducts including a 69-inch pipeline which Sweetwater Authority taps near the Sweetwater Reservoir seven miles east of the project.

The basic water service proposed for the area consists of 12 or 16-inch mains in E Street, F Street, G Street, and H Street. The static water pressure is 70 to 100 psi. A 12-inch waterline in G Street connects the lines in Bay Boulevard and Tidelands Avenue. This pipeline is necessary to maintain a looped system during development of the project. An easement for pipeline operation should be maintained even though the area might be fenced for security reasons by Rohr Industries. Figure 8 illustrates schematically the proposed water system.

Phased development may require offsite pipeline construction, especially in industrial areas, to maintain adequate pressure and fire flows. A temporary connection to National City pipelines should be made during development of the D Street Fill area, as well as a permanent valved connection for fire protection of facilities in either city. The major factor in sizing pipelines for this project will be fireflows, especially commercial or industrial buildings which may require 4,000 to 9,000 gallons per minute provided by looped 12-inch or single 16-inch pipelines.

2. Proposed Sewer Service. The Metropolitan Sewerage System of San Diego (Metro System), of which Chula Vista is a member agency, services Chula Vista via a 78-inch diameter trunk sewer which lies easterly of the onsite railroad line and drains northerly to the Point Loma Sewage Treatment Plant. The proposed development will generate an average daily flow of approximately 0.4 million gallons and a peak daily flow of 0.8 million gallons.

The project area is proposed to drain to an existing manhole north of E Street where metering facilities would be constructed. Sewers flowing by gravity to this location at even a relatively flat 0.2 to 0.4 feet per 100 feet would require considerable earthwork for the D Street Fill (Subarea 1) and Gunpowder Point (Subarea 2) developments. Portions of those areas will drain towards a sewage lift station which will force the sewage under pressure across the bridge or dike to gravity sewers. Phased development may require extensive offsite grading and sewer extensions. Figure 8 illustrates schematically the proposed sewer system.

3. Proposed Grading and Drainage. The project requires importing up to one million cubic yards of earth to ensure building pads are above the 100-year flood level (about elevation 10) and above higher high tide level. Availability of import material will affect the construction schedule because of the quantity and time required to surcharge the D Street Fill and the problems there would be in hauling dirt into the area through recently developed projects. Figure 9 illustrates the proposed grading concept for imported fill.

Drainage of storm flows is affected by the elevation of higher high tide and having gravity pipe or street flow upstream at a minimum slope of six inches per one hundred feet. Special caution is required at the marshes to reduce problems of silting and oil or chemicals. Some diversion of flood water is proposed and desilting/retention basins may be required.

A major detention basin is proposed for the Midbayfront to accept surface drainage and provide for desilting and oil and chemical entrapment.

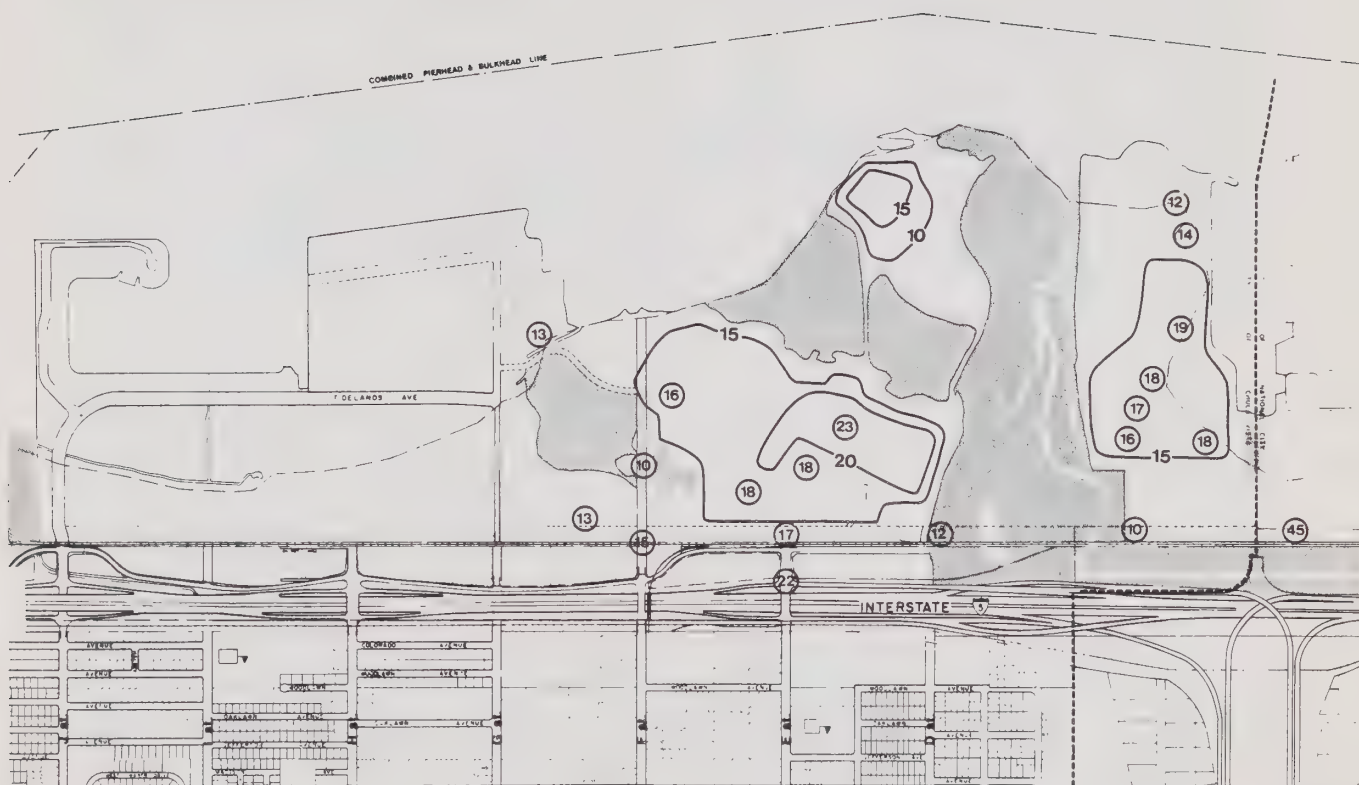


FIGURE 9

CHULA VISTA LOCAL COASTAL PROGRAM GRADING CONCEPT FOR IMPORTED FILL



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4. San Diego Gas And Electric ROW. Due to the recommended roadway configuration for Bay Boulevard at the intersection with E Street, street widening is envisioned on the west side of the SD & AE Railroad tracks within the 150 foot wide San Diego Gas and Electric right-of-way. While this poses no interference with the major 138 KV lattice tower, some relocation may be necessary for the two separate 69 KV power lines presently running on either side of the railroad track. If feasible these lines should be consolidated and incorporated elsewhere in the utility right-of-way.

Where the Tidelands Avenue extension is proposed to be incorporated into the railroad levee at the Sweetwater Marsh crossing, the roadway bed will need to cross beneath the tower lattice power lines at either end. Coordination with the San Diego Gas and Electric Company will be required.

ENVIRONMENTAL MANAGEMENT

The Chula Vista Bayfront Land Use Plan provides for the enhancement and long term management of its approximately 230 acres of wetland resources and the establishment of another 62 acres of protected upland resources. The condition of these resources is summarized in this section. A detailed description, including wildlife inventories and biologic assessment, is included in the Final Analysis of Select Biological Issues Relating to the Chula Vista Bayfront Plan.¹

The basic objectives and detailed environmental management objectives derive from the close cooperation of many individuals and agencies working to assess the feasibility and determine the relative benefits from integrating development objectives into a critical natural environment. Following the detailed management provisions, a summary comparison of proposed modifications to the wetland and upland resources is provided.

EXISTING CONDITIONS

Major features of the planning area include D Street Fill, Sweetwater River, Sweetwater Marsh Complex, Gunpowder Point, Vener Farm, and F-G Street Marsh (see Figure 10). The Sweetwater Marsh Complex refers to the hydrologically connected wetlands near Gunpowder Point (i.e., Sweetwater Marsh, Paradise Creek Channel, Vener Pond, E Street Marsh). Paradise Creek Marsh lies north of the Paradise Creek Channel, but is within the city limits of National City and is not included in the planning area.

The marshlands within the Chula Vista Bayfront redevelopment area comprise a total of about 200 acres as outlined below:

● Sweetwater Marsh	120 acres
● Paradise Creek Channel area	15 acres
● Vener Pond	15 acres
● Vener (E Street) Marsh	34 acres
● F-G Street Marsh	15 acres
● Freshwater (remnant) Marsh	1 acre

These approximate values do not include mudflats along San Diego Bay, and are derived from the U.S. Army Corps of Engineers (1977) Draft Environmental Impact Statement on the proposed Sweetwater River flood control channel project.

1. Sweetwater Marsh. Sweetwater Marsh is a coastal salt marsh that receives freshwater input from the Sweetwater River. The fresh water is primarily derived from urban runoff occurring in approximately 37 square miles of watershed below the Sweetwater Dam. The marsh is bounded by D Street Fill on the north, Interstate 5 on the east, upland areas including Gunpowder Point on the south, and San Diego Bay on the west.

¹ Jones and Stokes Associates, March 1983.

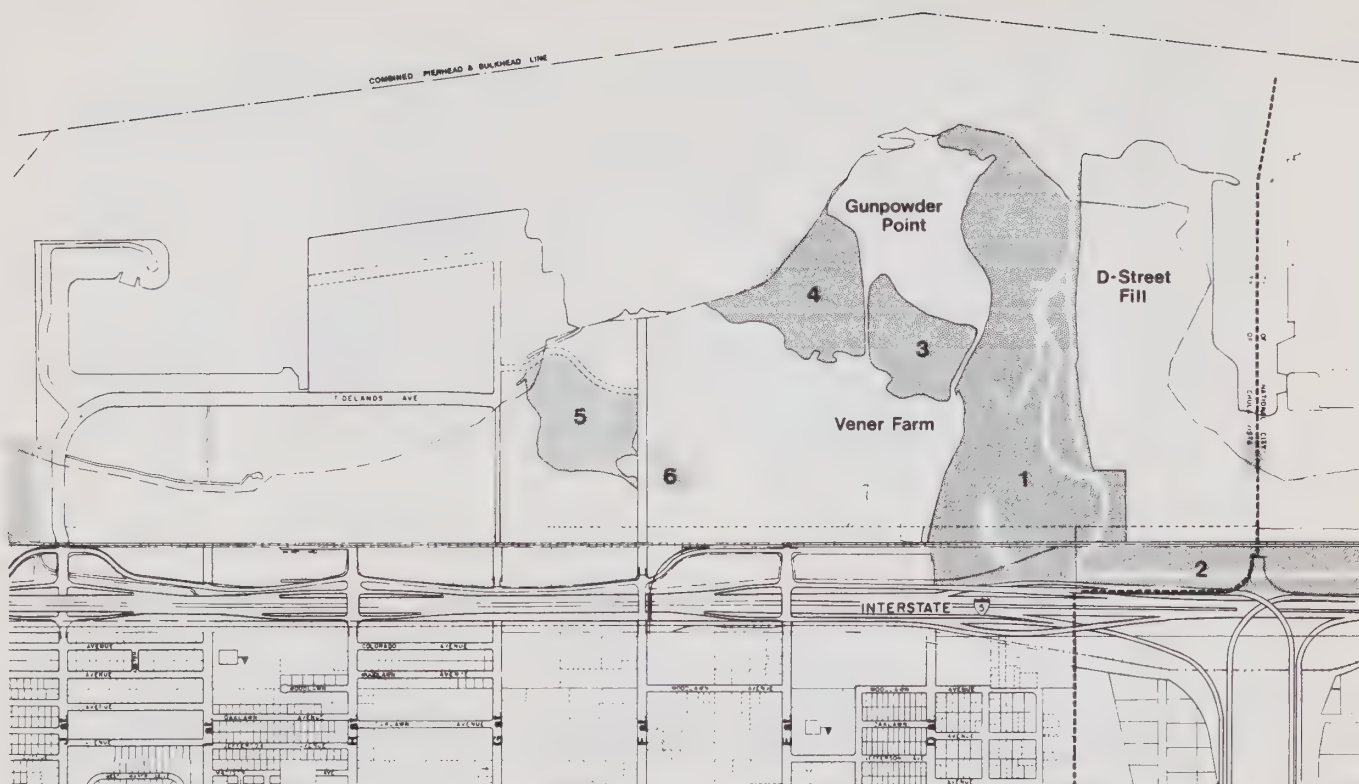


FIGURE 10

WETLAND RESOURCES

- 1 Sweetwater Marsh
- 2 Paradise Creek Channel Area
- 3 Vener Pond
- 4 Vener (E Street) Marsh
- 5 F-G Street Marsh
- 6 Freshwater Pond (Remnant Marsh)

CHULA VISTA LOCAL COASTAL PROGRAM WETLAND RESOURCES



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2. Paradise Creek Channel. The Paradise Creek Channel area is a highly degraded marsh (Williams and Rieger 1973) between the Interstate 5 right-of-way and the SD & AE Railroad right-of-way on the west. The area apparently was used as a sanitary landfill as evidenced by the amount of broken glass and other debris below the soil surface. A man-made diversion channel provided an outlet for Paradise Creek when the original outlet was obliterated by development of the 24th Street Terminal. Continued disturbance of this area results from off-road vehicle activity.

3. Vener Pond. Vener Pond is bounded on the north by a breached dike, on the east by agricultural fields, on the south by a dike, and on the west by agricultural fields on Gunpowder Point. Both the north and south dike served as access roads to Gunpowder Point, but the north dike is no longer in use and has been breached, allowing tidal influence at tides greater than 5.6 feet above mean lower low water (MLLW). A small corrugated pipe culvert through the south dike connects Vener Pond with Vener (E Street) Marsh. The pond area contains small islands with limited development of *Salicornia* (pickleweed) stands. Most of the area consists of mudflats and is free of vascular plant growth. During periods of very high tide cycles, the restricted flushing prevents complete drainage during low tide, and some areas

remain flooded during several tidal cycles. This persistent inundation is probably responsible for maintenance of the mudflats and restriction of plant growth.

4. Vener (E Street) Marsh. Vener (E Street) Marsh is bounded on the north by Gunpowder Point and the access road across the south dike, on the east by agricultural fields, on the south by a boat works and softwater filter business, and on the west by San Diego Bay. It is a coastal salt marsh with no freshwater input from streams.

5. F-G Street Marsh. F-G Street Marsh is bounded by F Street on the north, a fill area on the east, a manufacturing facility and G Street on the south, and Tidelands Avenue on the west. It receives storm drain discharge from the Rohr Industries area to the southeast and retains connection to San Diego Bay by way of a channel under Tidelands Avenue.

6. Freshwater Pond. The freshwater (or remnant) marsh is about a 1.25-acre pond located on the north side of F Street. At one time it was part of F-G Street Marsh, but hydrologic isolation from the latter has resulted in development of freshwater marsh vegetation around a seasonal pond fed by winter rains and agricultural runoff.

7. Gunpowder Point. Gunpowder Point is an isolated upland feature of the Chula Vista Bayfront. It is about 36 acres of upland area surrounded on the north by Sweetwater Marsh, on the east by Vener Pond, on the south by Vener Marsh, and on the west by San Diego Bay. Access is currently provided by a road on a dike running along the south edge of Vener Pond. Gunpowder Point is occupied by the remains of an abandoned munitions factory, two homes for farmworkers, and about 5 acres of agricultural field. Most of the upland vegetation is dominated by introduced bromes and other grasses, Russian thistle, tree tobacco, horehound, ice plants, and other invading species. A summary of existing land use characteristics is provided in Table 3.

8. D Street Fill. D Street Fill is located on the extreme north end of the Chula Vista Bayfront. It covers about 98 acres and is virtually barren of vegetation. Most of the fill material is sandy gravel material dredged from the deep-draft ship channel at the 24th Street Terminal. The fill is bounded on the north by the 24th Street Terminal ship channel, on the east by the SD & AE Railroad, on the south by Sweetwater Marsh, and on the west by San Diego Bay. With the construction of the the U.S. Army Corps of Engineers Sweetwater River channelization project the 24th Street Terminal ship channel will serve as the mouth of the channelized Sweetwater River. The San Diego Unified Port District has jurisdiction over 27 acres along the westerly and northerly edges of D Street Fill.

9. Vener Farm. Vener Farm is an agricultural operation occupying most of the upland areas between the marshlands and Tidelands Avenue. The operation consists primarily of truck farming and is now operated by Bay Pointe Ltd., a Chula Vista agricultural business. Current agricultural operations encompass about 78 acres, 8 acres of which are leased from San Diego Gas and Electric. The remaining acres are leased from Santa Fe Land Company, which owns most of the land in the study area.

TABLE 3

GUNPOWDER POINT EXISTING LANDSCAPE CONDITIONS

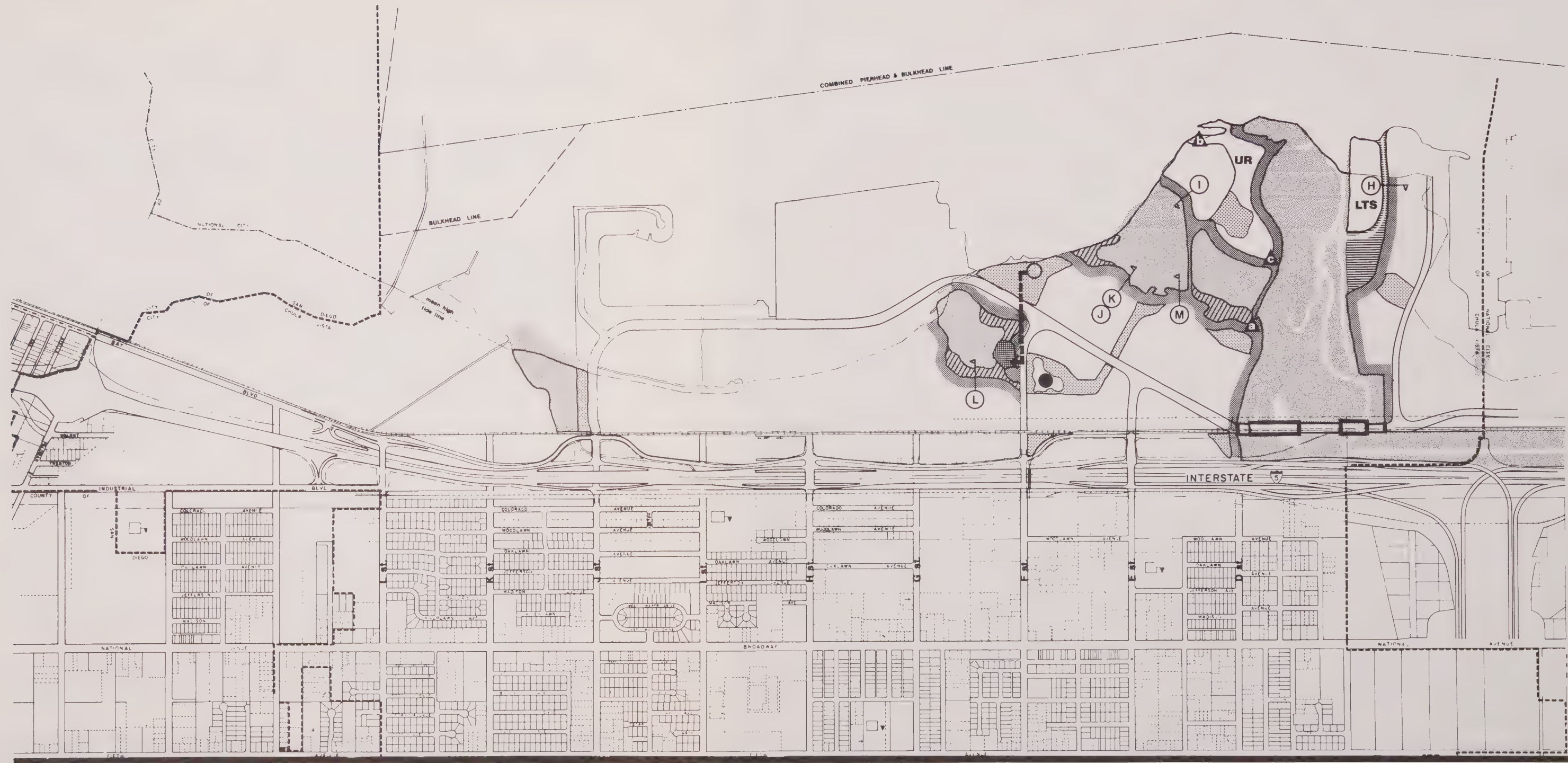
<u>AGRICULTURAL OPERATIONS</u>	<u>ACRES</u>
Agriculture Fields	4.79
Buildings, Structures, & Foundation	1.38
Dirt Roadway	3.95
Debris Piles, Mounds, And Pits	2.61
• An additional .50 acres of mounds exist within the upland category of the degraded lagoon.	
Disturbed Soils And Graded Areas	<u>7.64</u>
Subtotal	20.37
<u>NATURAL AREAS</u>	
Weed Grassland Characterized By Invasive Species	17.22
Frankenia Palmeri Stand	.12
Wetland Mosaic	1.99
• At northwest corner of Gunpowder Point	
Degraded Lagoon	1.20
Upland	
• (Includes .50 acres of mounds not included in debris piles, mounds, and pits category listed above.)	
Wetland	
• (This .65 acres of wetland is not included in the Gunpowder Point total acreage.)	
Subtotal	<u>20.53</u>
TOTAL	40.8

Source: Sedway Cooke Associates

BASIC ENVIRONMENTAL MANAGEMENT OBJECTIVES

A series of general objectives are provided as guidelines for future protection and enhancement of the wetland and upland resources in the Bayfront. These objectives are more explicitly developed in the following section on Detailed Management Provisions and Rationale.

1. Provide for the long-term protection of the critical natural habitat areas by cooperating in a multi-jurisdictional planning and implementation program with adequate safeguards and guarantees.



Wetland Resources

- Protected Wetlands
- Upland Conversion to Wetlands
- Wetland Enhancement
- Freshwater Pond
- Detention Basin

Upland Resources

- Wetland Buffer (100 feet)
- LTS Least Tern Sanctuary
- UR Upland Revegetation
- Other Open Space

- Widened Levee

- Causeway (replaces levee)

- Interpretive Center (alternative locations)

- Year Round Fresh Water Source

- Section (see text)

FIGURE 11 CHULA VISTA LOCAL COASTAL PROGRAM ENVIRONMENTAL MANAGEMENT ELEMENT

SEDWAY COOKE ASSOCIATES

URBAN AND ENVIRONMENTAL
PLANNERS AND DESIGNERS



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2. Incorporate the mitigation requirements of the Caltrans/Corps of Engineers joint highway and flood control project into the environmental management provisions of the Chula Vista Bayfront Land Use Plan so that land development and resource protection measures will be complementary.

3. Maintain coordination with the San Diego Unified Port District in the development of plans and programs for areas adjacent to the Chula Vista Bayfront to assure that environmental management objectives in the Bayfront Land Use Plan can be successfully implemented.

DETAILED ENVIRONMENTAL MANAGEMENT PROVISIONS AND RATIONALE

The detailed management provisions of the Land Use Plan are indicated graphically on the Environmental Management Map, Figure 11. They provide for specific protection and enhancement measures for the wetland and upland resources with specific design provisions for the critical wetland buffer conditions illustrated in a series of sections. The cross sections H through P are prototypical illustrations of a specific land use adjacent to the various wetland resources.

Specific management provisions are organized geographically for each of the following areas: Subarea 1--D Street Fill, Subarea 2--Gunpowder Point, Subarea 3--Midbayfront, and Subarea 4--Marsh Areas.

1. Subarea 1--D Street Fill.

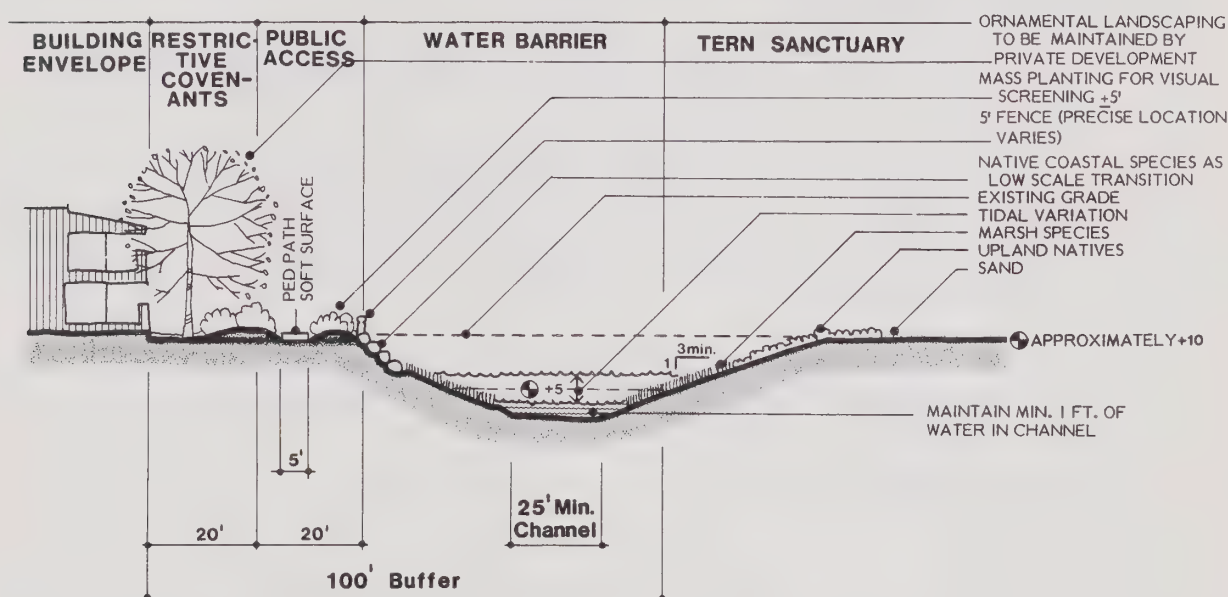
Critical Factors.

- The D Street Fill is bordered by a ship channel, San Diego Bay, Sweetwater Marsh, and the SD & AE Railroad levee.
- A delta at the western end of the fill, in San Diego Bay, is located on the Port owned lands and was apparently caused by a breach in the levee during filling.
- There is no existing use on the fill. The fill is barren of vegetation, and trespassers use the area for off-road recreation vehicles.
- For several years in the 1970's the fill supported a California Least Tern nesting colony. This species is on the state and federal endangered list. No young were fledged in 1980 or 1981; a pair were fledged in 1982; no young were fledged in 1983.
- The Caltrans/Corps of Engineers project proposes to acquire a 100 foot wide buffer strip along the southern boundary of the fill area adjacent to the marsh.
- The Caltrans/Corps of Engineers project also proposes to mitigate loss of wetland elsewhere with a conversion of 9.6 acres of upland to wetland.

Proposed Least Tern Sanctuary. The Land Use Plan creates a Least Tern Sanctuary jointly on privately held lands within the Bayfront planning area and on Port owned lands adjacent but outside the planning area. (See Figure 11.)

- Establish a minimum 10 acre sanctuary to be located at the southwest corner of the D Street Fill in order to maintain the greatest length of natural habitat on three sides of the sanctuary perimeter.

- Provide a wetland channel to separate the sanctuary from the adjacent developed areas. (See section H.)
- Design the channel for minimum maintenance utilizing tidal flushing to maintain channel depth. Channel shall be adequate to provide a barrier to access for humans, dogs, and cats.



SECTION H EXCAVATED CHANNEL AT TERN ISLAND SANCTUARY



Proposed Upland Conversion to Wetland. The required provision for 9.6 acres of upland conversion to wetland by Caltrans shall be located adjacent to the Sweetwater Marsh and generally east of the proposed Least Tern Sanctuary. (See Figure 11.)

- Utilize this new wetland to create a channel separating the Least Tern Sanctuary from the developed portion of the D Street Fill and to increase feeding areas directly east of the proposed sanctuary.

Proposed Wetland Buffer. The 100 foot wide buffer to be acquired as part of the Caltrans/Corps of Engineers project mitigation requirements shall be configured to protect the existing Sweetwater Marsh edge and the proposed new wetland. (See Figure 11.)

- Limit pedestrian access to the inboard 50 feet of the buffer.
- Provide visual access from the buffer into the wetland at specific points along the length of the buffer.

2. Subarea 2—Gunpowder Point.

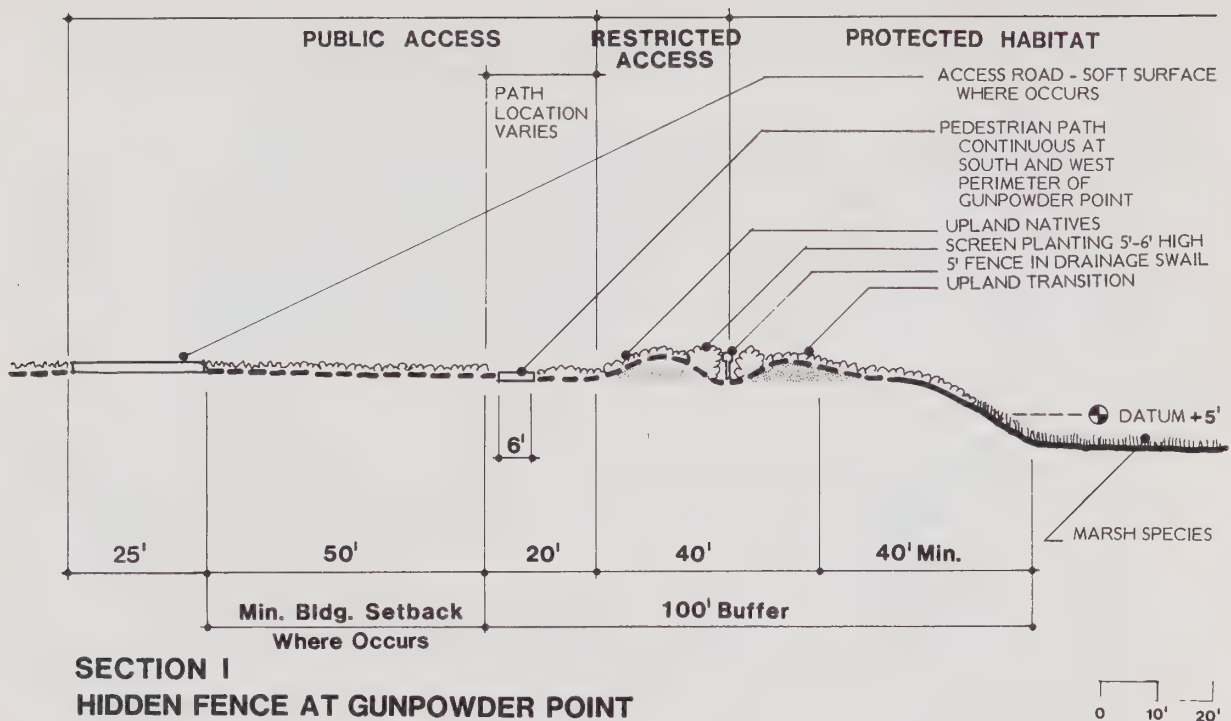
Critical Factors.

- The historic use of the point was for munitions manufacturing.
- The existing use of the point is farming. The entire forty-one acres are presently disturbed by farming operations or relic structures from the munitions manufacturing era. It is covered with buildings, foundations, roads, spoil piles, and borrow pits. The area appears to be cleaned periodically by a weed abatement program in conjunction with the farming operations.
- Existing upland wildlife species are those tolerant of disturbance and farm operation.
- The existing ecotone between the upland and adjacent wetlands is used as refuge by some wetland wildlife when the wetland is inundated during high tide (especially during storms).
- Wetland birds occasionally fly over the mosaic of wetlands and upland in the extreme northwest corner and over the northeastern corner of the agricultural fields which are located on the northeast corner of the Point. Wetland birds were not seen to fly over Gunpowder Point except for the extreme northeast and northwest corners.¹
- The ecotone between the upland and adjacent wetlands is used by Belding's Savannah Sparrow, a species on the state endangered list.
- A small population of Frankenia palmeria is located in the southeast corner of Gunpowder Point near the ecotone but within the upland area. This specie is a native plant on the California Native Plant Society list of rare plants. It is not on the state or federal endangered species lists. The San Diego area is the northern limit of the range for this species which has major distribution in Baja California.
- The Caltrans/Corps of Engineers proposes to acquire a 100 foot wide buffer on the north, east, and west sides of Gunpowder Point as a part of its mitigation program.

Proposed Building Envelope. Development on Gunpowder Point will be limited to an approximately 14 acre area within a zone furthest removed from environmentally sensitive natural habitat. (See Figure 11.)

- Locate buildings away from the northeast and northwest corners of Gunpowder Point to minimize possible influences on flight paths of some bird species.
- Avoid placement of development directly adjacent to Sweetwater Marsh or Vener Pond; maintain a minimum 100 foot buffer to provide for a refuge within the ecotone. (See Section I.)

¹ Jones and Stokes Associates, 1983.



- Confine buildings to the southwest portion of the point directly adjacent to the Bay. There is not an existing marsh or mudflat adjacent to this site and consequently, it is the area of least wetland and water bird activity. The northwest corner of E Street Marsh appears to have the lowest wetland bird use of any wetland in the Sweetwater and adjacent marshes. (Jones and Stokes Associates, 1983.)
- Maintain the largest open space area consistent with the development program. Minimize parking and building footprint coverage rather than building height. Provide approximately 50% of the hotel serving parking in the midbayfront area.
- Maintain a maximum building height of 8 stories in order to minimize coverage. Conditionally permit up to a maximum of 12 stories if it can be shown that increasing open land area will benefit the natural resource values.

Proposed Wetland Buffer and Levee Access. The 100 foot wide buffer to be acquired as part of the Caltrans/Corps of Engineers project mitigation requirements shall be configured to protect the existing marshes and pond. Access to Gunpowder Point shall be via the south levee with emergency access via the north levee. (See Figures 6 and 11.)

- Limit all human and domestic pet access to Sweetwater Marsh, Vener Pond, and E Street Marsh. Incorporate a hidden fence into a graded drainage swale to control access to the wetland without interfering with distant views. (See section I.)

- Direct human interest to specific controlled viewing locations along the south and east perimeter of the point.
- Minimize disruption to wildlife from use of the southern levee by limiting fill in the wetlands (less than 1/2 acre) to only that necessary for levee reinforcement or protection to adequately maintain the proposed roadway.
- Screen the more critical pond side of the southern levee with landscaping to reduce disturbance to marsh and water birds. (See section G in the Circulation provisions of the plan.)
- Provide for pedestrian access on the southern levee on the E Street Marsh side of the roadway.
- Deny all access to the northern levee except for emergency vehicles.

Proposed Restoration. Degraded or limited natural resources on Gunpowder Point are to be enhanced with a program of wetland and upland restoration.

- Develop an interpretive center for public use. The center can be located in areas of high wildlife use if carefully screened (e.g., developed as a photographic blind). Alternative locations for the interpretive center are shown in Figure 11.
- Preserve the existing Frankenia palmeri population. Protect adjacent lands and encourage the spread of the population.
- Remove the berm around the lagoon in the southwest corner of Gunpowder Point and restore it to a healthy wetland. (This area could be established as a focus of one of the alternative interpretive centers.)
- Remove spoil from the wetland-upland mosaic in the northwestern corner and restore to wetland.
- Restore the undeveloped portions of the upland to a southern coastal scrub or other appropriate upland vegetation type(s). A restoration program should include: (1) removal of existing structures, spoil, and other remnants of human use; (2) grading to level spoil and fill borrow pits; (3) an approved revegetation design to establish a native and naturalized landscape community; and (4) a soil erosion design to control erosion of scarified areas into the adjacent wetlands during revegetation operations.

3. Subarea 3—Midbayfront.

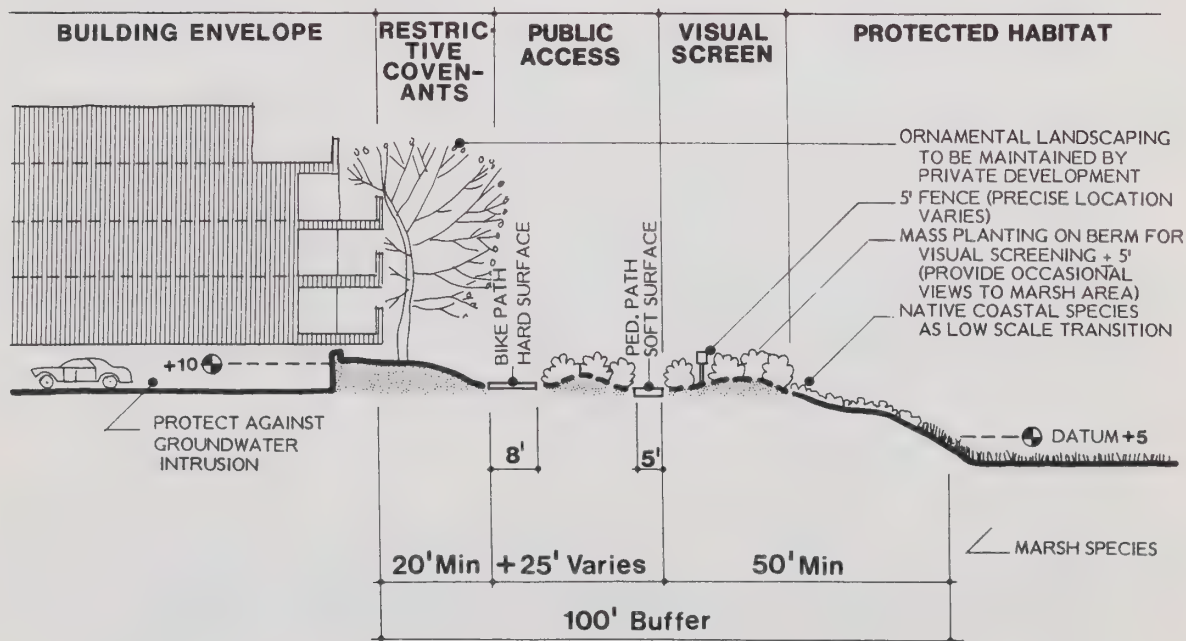
Critical Factors.

- The existing use of the main portion of the Midbayfront is farming. Over time the E Street Marsh and the F-G Street Marsh have been reduced in size with their margins encroached upon by spoil deposition and farming operations.
- A low-lying agricultural field north of the F-G Street Marsh has been identified as a seasonal fresh water pond and is sometimes referred to as a remnant marsh.
- Existing upland wildlife is limited to those species tolerant of farming and adjacent industrial operations.

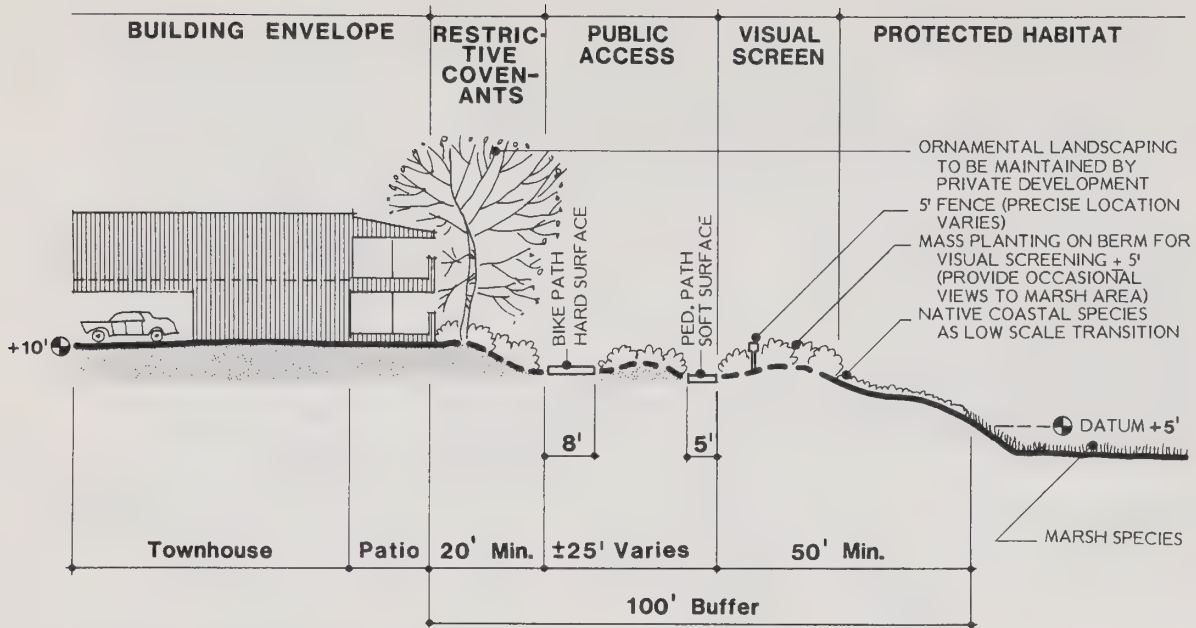
- Wetland wildlife similar to that using the Sweetwater Marsh and Vener Pond have been observed on the E Street Marsh. Seasonal use by migratory species of the remnant marsh has been reported. Some wetland wildlife use, including a light-footed Clapper Rail (a state and federal endangered species), has been reported for the F-G Street Marsh although the marsh has been seriously impacted by fill, potentially degraded water quality, and directly adjacent human use.

Proposed Wetland Buffer. The 100 foot wide buffer to be acquired as part of the Caltrans/Corps of Engineers project mitigation requirements shall be configured to protect the existing marshes and pond. In addition, a 100 foot buffer is proposed around the F-G Street Marsh except where the existing industrial building encroaches within the buffer area. Adjacent to the existing structure the buffer will be as wide as space permits.

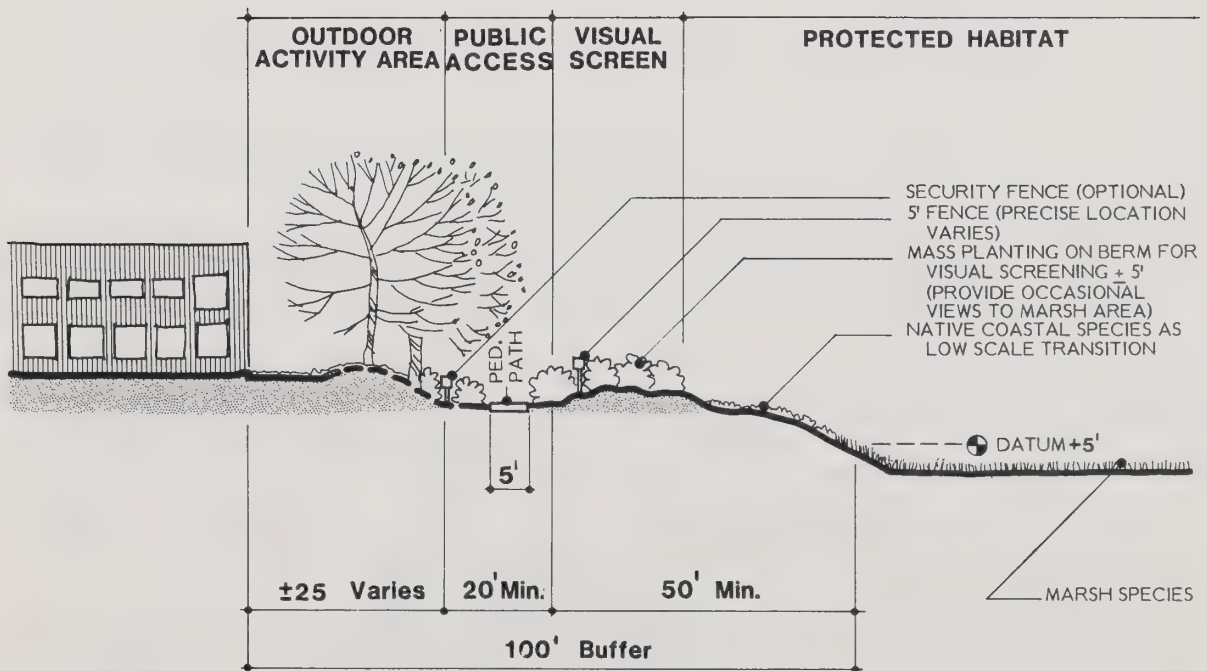
- Limit all human and domestic pet access to Sweetwater Marsh, Vener Pond, the E Street Marsh, and the F-G Street Marsh. (See sections J through M.)
- Limit pedestrian access and bicycle access to the inboard 50 feet of the buffer.
- Provide visual access from the buffer into the wetlands at specific points along the length of the buffer.



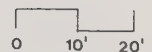
SECTION J RESIDENTIAL BUFFER-Mid-Rise MFD

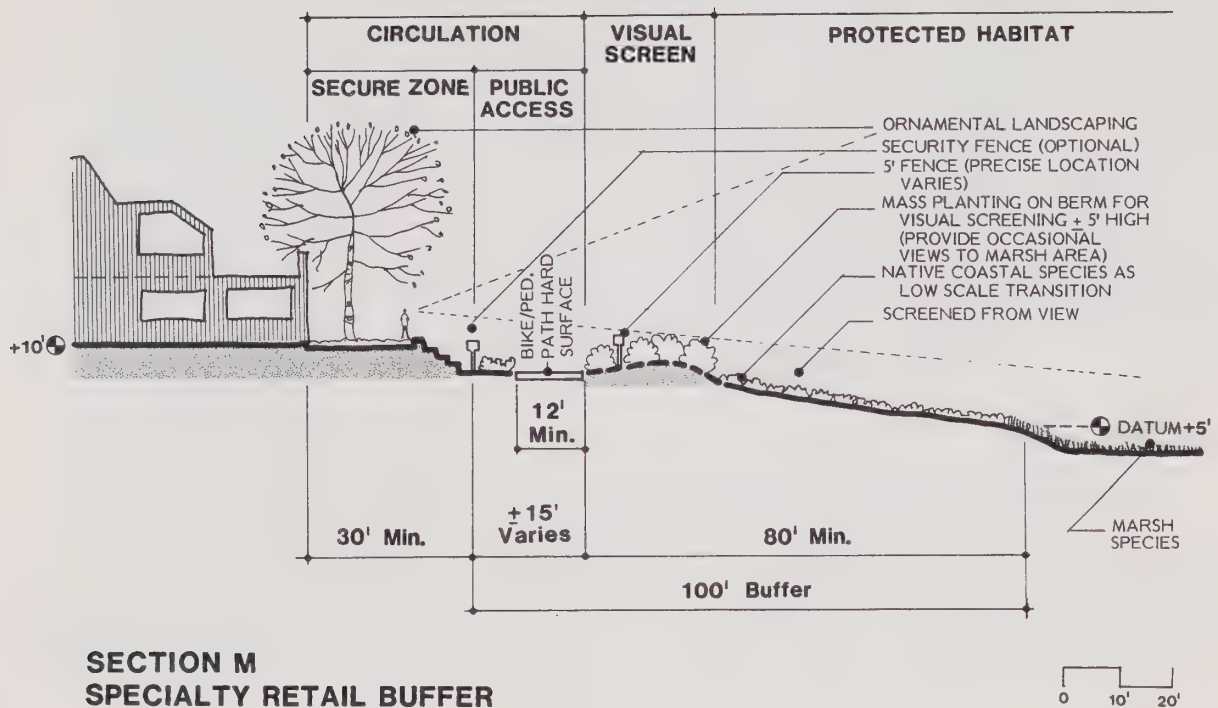


SECTION K
RESIDENTIAL BUFFER - Townhouse



SECTION L
OFFICE PARK BUFFER





**SECTION M
SPECIALTY RETAIL BUFFER**

Proposed Wetland Restoration. Degraded areas of former wetlands are proposed to be restored to high quality salt marsh or mudflat in areas adjacent to Vener Pond, the E Street Marsh, and the F-G Street Marsh. (See Figure 11.) Additionally seasonal freshwater supply will be increased and urbanized runoff into the wetlands controlled.

- As compensation for filling of less than 1 acre of existing wetland elsewhere in the Bayfront in order to achieve the necessary circulation improvements, filled or degraded margins will be restored as high quality wetland. The approximate increase in wetland shall be:

E Street Marsh	+ 3.0 acres of salt marsh
F-G Street Marsh	+ 2.5 acres of salt marsh
Vener Pond	+ 3.4 acres of mudflat

- In order to have the maximum feasible supply of high quality fresh water for the marsh system, high quality water from the industrial softwater manufacturing operation at the foot of F Street will be delivered to a freshwater pond via an underground pipe on the margins of the degraded portions of the F-G Street Marsh. This water supply will supplement the on-site runoff to prolong the seasonal freshwater ponding.

- At the low-lying agricultural field north of the F-G Street marsh, construct a storm water detention facility to accept urban runoff from the Midbayfront. Utilize this facility to store runoff during peak storm periods, and as a sediment trap. Connect this storm detention facility to the new freshwater pond at the F-G Street Marsh to provide a seasonal water supply to the wetland. (Procedures for assuring water quality standards will be included in the Phase III Implementation Program.)

4. Subarea 4—Marsh Areas.

Critical Factors.

- The Sweetwater Marsh is one of the priority wetlands identified by the California Department of Fish and Game. It is the most significant wetland in the San Diego Bay.
- Existing use of the marsh complex is as wildlife habitat, electrical transmission line right-of-way, a railroad track, and miscellaneous fill related to adjacent agricultural activities.
- The wildlife use of the wetlands include a broad range of wetland species, especially birds. (See Jones and Stokes Associates, 1983 for references to inventories.)
- Portions of the marsh complex are degraded.
- The marsh complex is proposed for acquisition by Caltrans/Corps of Engineers for the combined highway flood control project to protect habitat for the endangered light-footed Clapper Rail and other wetland species.

Proposed Tidelands Extension. Tidelands Avenue is proposed to cross the Sweetwater Marsh in conjunction with improvements to the existing railroad levee.

- The crossing of the Sweetwater Marsh on the existing railroad levee will include fill on degraded portions of the marsh located on the western boundary of the existing levee. The area to be filled is less than 1 acre.
- The existing railroad viaducts spanning the water channels connecting the portions of the Sweetwater Marsh on either side of the railroad will be rebuilt to increase the length of the span and thereby, improve existing tidal flow to the eastern portion of the marsh.

Proposed Restoration. The Tidelands Avenue extension is proposed to be a part of a restoration program for the railroad levee crossing of Sweetwater Marsh.

- In order to accommodate the wider cross section required for the roadway without adversely impacting the marsh, the amount of existing bridging will be increased, fill removed, and wetland restored to compensate for the fill required for the remaining portions of the roadway.
- An equivalent area of approximately 1 acre of high quality wetland will be created for the amount of poor quality (between eight foot and nine foot elevation) salt flats covered in the road widening.

- Additional areas of high ground adjacent to the west side of the road will be lowered in elevation to establish an improved salt marsh in that area.

COMPARISON OF NATURAL RESOURCE MODIFICATIONS

A summary of designated environmental resources in the Chula Vista Bayfront Land Use Plan is included in Table 4. In addition to the existing 212.9 acres of existing wetlands protected by the Plan, the total wetland resources will be increased by 9.6 acres. An additional 11.4 acres of the existing resource will be enhanced by restoration measures. Including the upland resources proposed to be included in the Caltrans/Corps of Engineers buffer acquisition, a total of 92.4 acres of upland area will be protected or maintained solely for recreational use.

TABLE 4

SUMMARY OF DESIGNATED ENVIRONMENTAL RESOURCES

	<u>ENHANCED PORTION</u>	<u>NET ACRES</u>
Wetland Resources		
Total Protected Wetlands		212.9
Upland Conversion to Wetlands		9.6
Wetland Enhancement	8.9	
Freshwater Pond	1.5	
Detention Basin	<u>1.0</u>	
Total	11.4	222.5
Upland Resources		
Wetland Buffer		33.8
Least Tern Sanctuary		10.0*
Upland Revegetation		9.6
Other Open Space		<u>39.0</u>
Total		92.4

*Includes five acres of land owned by the San Diego Unified Port District

Table 5 summarizes the proposed modifications to each of the identified wetland resources and Table 6 those for the upland resources. Land development plans and environmental management provisions have been explicitly integrated in the Chula Vista Land Use Plan so that both the quantity and quality of wetlands will be increased and substantial adjacent uplands restored and protected from utilization that would threaten the wetland wildlife.

TABLE 5: SUMMARY OF PROPOSED WETLAND RESOURCE MODIFICATIONS

WETLAND RESOURCE	EXISTING SIZE	PROPOSED MODIFICATION	POTENTIAL IMPACTS OR ENHANCEMENTS
Sweetwater Marsh	<u>±</u> 120 acres	• Tidelands extension incorporated into railroad ROW on existing levee • No net increase in wetland fill • Conversion of 9.6 acres of upland at D Street Fill to wetland as part of Caltrans/Corps requirements	• Fill in less than 1 acre of degraded wetland areas for road widening (general elevation 8 to 9 feet above Mean High Tide) • Increased bridging on railroad levee resulting in removal of less than 1 acre of fill and improved tidal flow to eastern portion of marsh • Enhancement of wetland west of road-way improvements by lowering elevation and increasing tidal flow • <u>±</u> 9.6 acre increase in high quality saltmarsh
Paradise Creek Channel Area	<u>±</u> 15 acres	• No direct modification proposed	• Improved tidal flow through railroad levee resulting from increased bridging
Vener Pond	<u>±</u> 15 acres	• Removal of debris and lowering of elevation at the eastern margin • Access road to Gunpowder Point on southern levee	• <u>±</u> 3.4 acre increase in high quality mudflat habitat • No fill in wetland anticipated • Occasional flushing of wetland birds due to traffic movement and noise
Vener (E Street) Marsh	<u>±</u> 34 acres	• Removal of debris and lowering of elevation at the southeast margin • Access road to Gunpowder Point on southern levee	• <u>±</u> 3.0 acre increase in high quality salt-water marsh • No fill in wetland anticipated • Occasional flushing of wetland birds due to traffic and noise
F-G Street Marsh	<u>±</u> 10 acres with <u>±</u> 5 additional acres of marginal quality marsh at margins	• Removal of debris and fill and lowering elevation on the north, east, and south margins • Creation of freshwater pond within filled margins • Provision of freshwater supply to support seasonal inflow	• <u>±</u> 2.5 acre increase in high quality salt-water marsh • Improved quality in existing <u>±</u> 15 acre saltwater marsh • <u>±</u> 1.5 acre seasonal freshwater habitat • Increased water quality in F-G Marsh
Freshwater (Remnant) Marsh	<u>±</u> 1 acre	• Utilization as a site for seasonal storm water detention	• Seasonal freshwater habitat replaced in proximity to F-G Street Marsh • Detention location for storm water runoff from Bayfront provides opportunity to remove sediments and pollutants before discharging to F-G Street Marsh



TABLE 6: SUMMARY OF PROPOSED UPLAND RESOURCE MODIFICATIONS

WETLAND RESOURCE	EXISTING CONDITION	PROPOSED MODIFICATION	POTENTIAL IMPACTS OR ENHANCEMENTS
Wetland Buffers	● Mixed; debris strewn	● Protection of a total of 33.8 acres of buffer; min. 100 ft. wide; adjacent to all wetlands. Includes those portions required as part of Caltrans/Corps project.	● Improved wildlife habitat; visual screening of feeding areas
Least Tern Nesting Area (D Street Fill)	● Unknown ● Decreasing incidence of fledged pairs	● Creation of 10 acre island sanctuary at SW corner of D Street Fill ● Creation of new wetland from existing upland area	● Isolation of 10 acre upland sanctuary from human or domestic animal impact ● +9.6 acre increase in wetland habitat in proximity to nesting area
Gunpowder Point	● Disturbed upland ● Viable ecotone boundary located within designated 100 foot buffer	● Grading, clearing, and vegetation of upland area ● Removal of debris and lowering of surrounding berm in ecotone at the lagoon at SW corner	● +9.6 acres of protected upland habitat ● Increase in water quality of existing tidal lagoon

PHYSICAL FORM AND APPEARANCE

The Bayfront provides a unique opportunity to establish a harmonious relationship between the natural setting and the man-made environment. The area's natural resources and scenic quality provide a setting which have a distinctive esthetic and in turn, can ensure economic success for activities locating in proximity to it. Moreover, development which is properly sited and designed can hold these natural areas in permanent reserve and provide for controlled access and enjoyment of them by the public.

BASIC FORM AND APPEARANCE OBJECTIVES

Basic policies recommended to integrate man's use of the land and water resources into a sensitive natural environment are as follows:

1. **Healthy Wetlands.** Preserve existing wetlands in a healthy state to ensure the esthetic enjoyment of marshes and the wildlife which inhabit them.
2. **Industrial Image.** Change the existing substandard industrial image of the Bayfront, and develop a new identity consonant with its future public and commercial recreational role.
3. **Shoreline Appearance.** Improve the visual quality of the shoreline by promoting both public and private uses which will provide for proper restoration, landscaping, and maintenance of shoreline areas.
4. **Clearing and Screening.** Remove, or mitigate by landscaping, structures or conditions which have a blighting influence on the area.

5. Imageability. Develop a readily understandable and memorable relationship of the Bayfront (and the areas and elements which comprise it) to adjoining areas of Chula Vista and to the freeway and arterial approaches to the Bayfront.

To promote these policies, the Form and Appearance provisions of the Land Use Plan acknowledges three major components which comprise the physical form of the area: (1) natural resource areas to be preserved; (2) an open space system including walkways, bicycle ways, and park areas; and (3) development units having common usage and/or qualities, which should be treated as distinctive, but closely interrelated, visual entities. To reinforce the physical quality of these three components the Form and Appearance Map, Figure 12, identifies: (1) landscape character and function; (2) major gateways; (3) architectural edges; and (4) views.

LANDSCAPE CHARACTER AND FUNCTION

Four major landscape components are recommended to establish strong visual continuity in response to a varied functional need. These are Landscape Screening, Parking Area Planting beneath the SDG & E power lines, Informal Groves in public parkland, and Formal Street Tree Planting on major circulation spines. The characteristics and representative species for the various landscape functions are shown in Table 7.

TABLE 7: RECOMMENDED TREE PLANTING CHARACTERISTICS AND REPRESENTATIVE SPECIES

<u>FUNCTION</u>	<u>CHARACTERISTICS</u>	<u>REPRESENTATIVE SPECIES</u>	<u>REPRESENTATIVE LOCATION</u>
1. Landscape Screening	● 40' to 60' height ● upright form ● evergreen	● Melaleuca Sp. and Eucalyptus Sp.	● Bay Boulevard
2. Parking Area Planting	● 10' to 15' height ● globular or multi-stem form ● evergreen	● Ligustrum Nerium SP. and Oleander	● SDG&E ROW
3. Informal Groves	● 40' to 80' height ● upright and open-branching in contrast with dense, vertical form ● mixed deciduous and evergreens	● Platanus acerifolia (to match existing park) and Pine Sp.	● Community Parks
4. Formal Street Tree	● 40' to 60' height ● crown shaped form ● evergreen	● Ficus nitida ● Ficus rubiginosa	● Tidelands Avenue, E Street, and D Street ● Bay Boulevard and Marina edge on D Street Fill

1. Landscape Screening. Dense plantings of trees and shrubs are proposed in locations throughout the Bayfront to serve three purposes: (1) to diminish the visual impact of large existing industrial structures, such as those of Rohr Industries and the San Diego Gas and Electric Company's plant and transmission towers, and extensive parking areas and outdoor storage areas; (2) to help define major entry points to the Bayfront and to frame views; and (3) because of the flat undifferentiated nature of the Bayfront site, to be used in masses as visual stopping points to limit views and provide natural vertical elements.

2. Parking Area Planting. The San Diego Gas and Electric Company has recognized automobile parking as a compatible joint use of the 150-foot wide right-of-way that bisects the entire Bayfront. In order to diminish the visual impact of the power lines and to strengthen the ground plane connection between both sides of the right-of-way, the Form and Appearance provisions recommended that an aggressive planting program be coordinated with parking improvements beneath the power lines. The San Diego Gas and Electric Company's criteria will permit planting that can be kept to no more than fifteen feet high, thereby maintaining sufficient clearance at the lowest point in the power line catenary. Planting in the parking areas should establish a dense ground plane massing of shrubs and short trees to create a grove effect that screens cars from view and ties together in a strong horizontal line an interlocking mass of foliage on either side of the right-of-way. (See section D in the Circulation provisions of the plan.)

3. Informal Groves. A series of informal groves have been identified in the Form and Appearance Map, Figure 12, which identify the major community or neighborhood parks interconnected by continuous pedestrian circulation along the Bayfront's edge and into its interior. These groves should be planted with the same species in informal drifts to provide shade for recreational uses.

4. Formal Street Tree Planting. Formal street tree planting has been designated for the major circulation spines of the Bayfront. The planting should be in regularly spaced intervals using species with predictable form characteristics to achieve strong linear avenues that guide views and establish perspective.

GATEWAYS

Certain points of access to the Bayfront will, by use, become major entrances to the different parts of the area. A significant portion of the visitors' and users' visual impressions are influenced by conditions at these locations. Hence, it is imperative that special consideration be given to roadway design, including signing and lighting, landscaping, and siting and design of adjoining structures. These special gateway locations are shown on the Form and Appearance Map, Figure 12.

ARCHITECTURAL EDGES

The interface of open spaces, such as parks and natural habitats, with developed areas, constitute functionally and visually critical areas deserving special design attention. From a functional viewpoint, development should be required to comply with the following conditions:

1. Habitat Protection. Structures should be sited a sufficient distance from natural habitat areas to protect the natural setting and prevent interference with wildlife. (See also wetland buffers in the Environmental Management Section.)

2. Pedestrian and Bicycle Access. Structures should be sited at a sufficient distance from the water's edge or marsh edge to ensure unencumbered pedestrian and bicycle access.

3. Privacy. Structures should be so designed to ensure that the uses which take place in a structure or private space adjoining the structure do not detract from, or prevent appropriate public use of, adjoining public open spaces. In turn, the public areas should be designed and use regulated in a manner which does not diminish the intended use of adjoining developed lands.

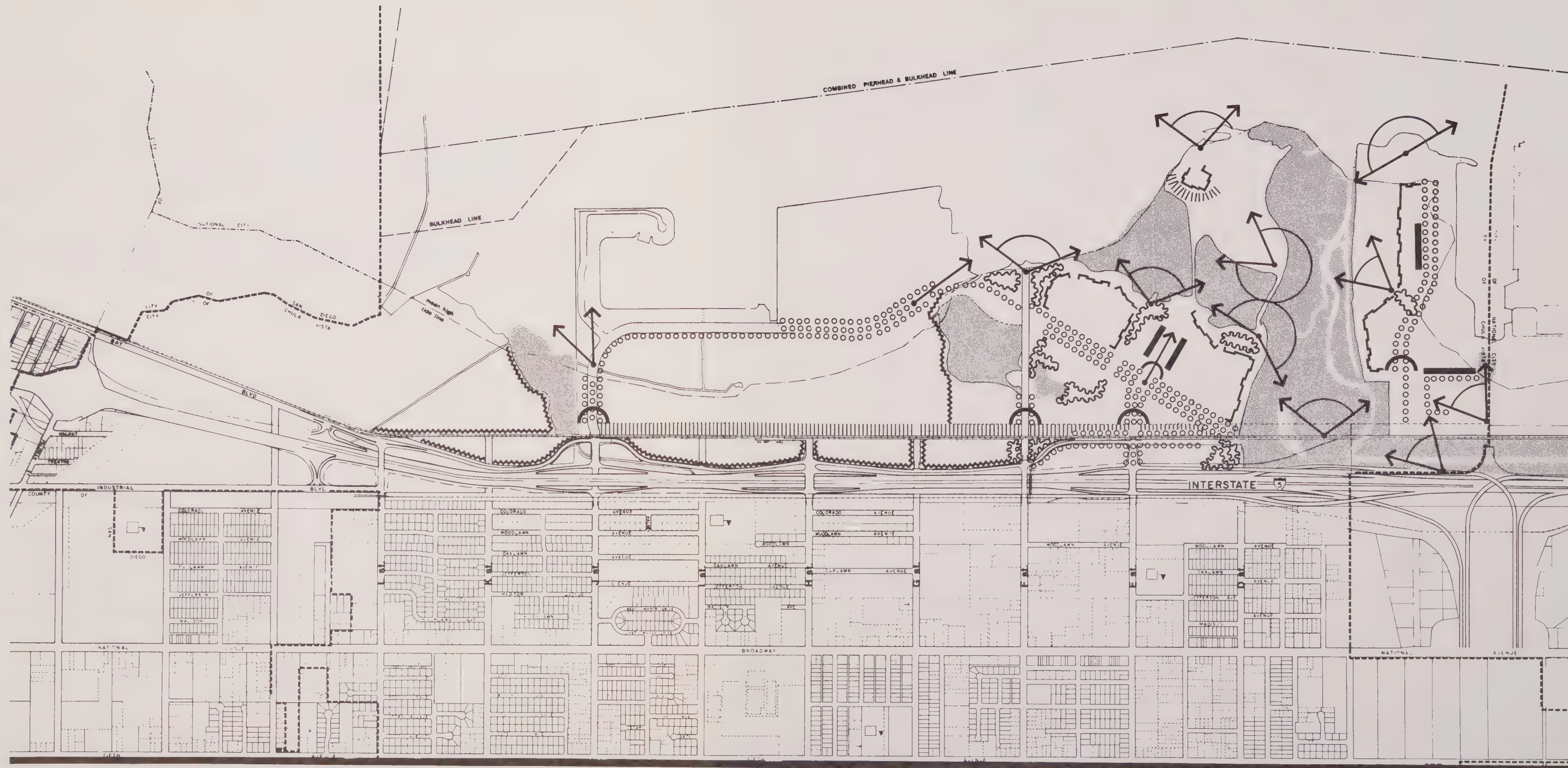


FIGURE 12
CHULA VISTA
LOCAL COASTAL PROGRAM
FORM & APPEARANCE
ELEMENT



0' 1200'

SEDWAY COOKE ASSOCIATES
 URBAN AND ENVIRONMENTAL
 PLANNERS AND DESIGNERS

Visually, edges are of two kinds: (1) firm edges, where there is a readily distinguishable and abrupt change from open space to building mass; and (2) irregular edges where open spaces and buildings are more intricately intertwined at a small scale. Firm edges are shown in the Form and Appearance Map, Figure 12, where a strong visual form, generally linear, is necessary to provide either for a terminus of views, visual distinctions between areas, channeled or controlled views in certain directions, or a sense of entry or arrival. These edges generally would be formed by buildings but also may be achieved by use of earth berms or mass plantings.

Irregular edges are shown where it is visually desirable to soften or de-emphasize the distinction between open space areas and adjoining development. This prevents harsh contrasts between different areas, allows visual penetration between areas, and variation in the spatial experiences and qualities in these areas. (See Figure 12.)

VIEW POINTS

Planning and development of the Bayfront should ensure provision of three types of views:

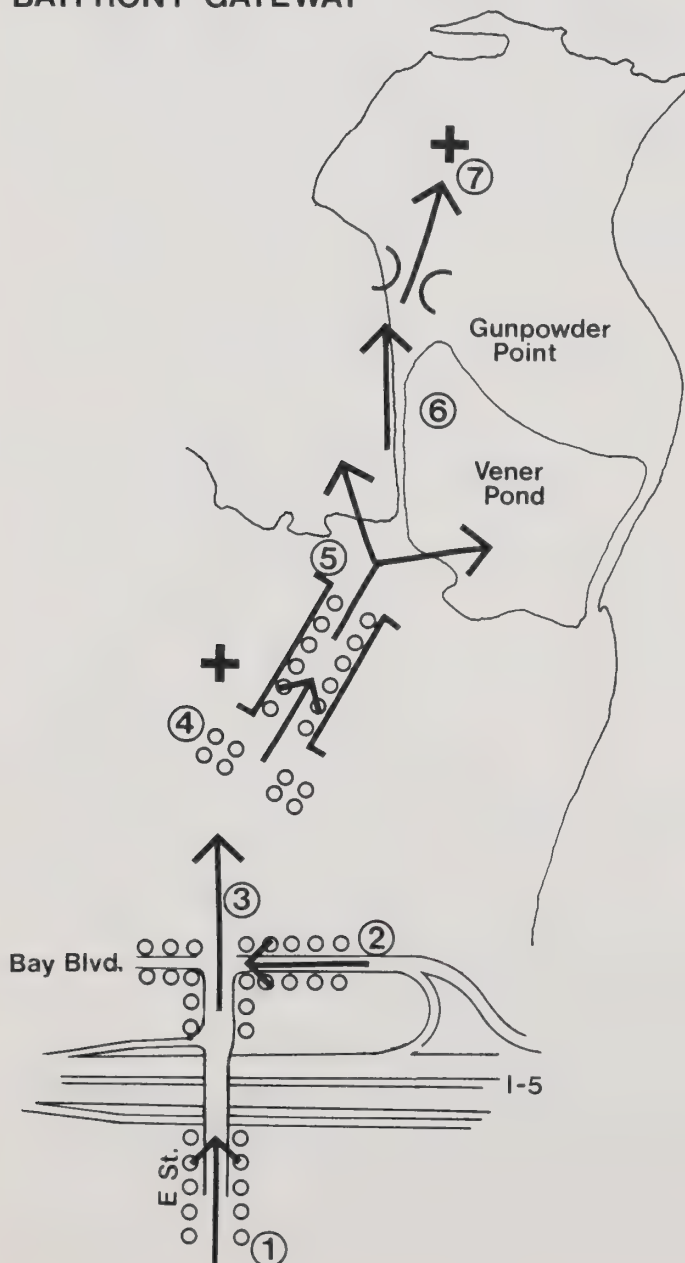
1. **Views from the Freeway and Major Entry.** The primary concern is to ensure a pleasant view onto the site and establish a visual relationship with the Bay, marshes, and Bay-related development.
2. **Views from Roadways Within the Site.** (Particularly from Tidelands Avenue, to the marshlands, Bay, parks and other Bay-related development.) Locations should preserve a sense of proximity to the Bay and marshlands.
3. **Views from the Perimeters of the Bayfront Outward.** In the first two instances, the view experiences are, for the most part, from a moving vehicle--momentary and unstructured. In this instance, the view is primarily a pedestrian-oriented stationary view and more sustained. These views will be experienced from the various parts of the open space and pathway system and enable persons to renew visual contact at close range with the Bay and marshlands.

IV. SUBAREA SITE SPECIFIC DEVELOPMENT & DESIGN PROVISIONS

In addition to the areawide objectives and plan provisions, the Land Use Plan provides site specific development and design provisions which are unique to the Bayfront approaches and individual subareas.

BAYFRONT GATEWAY

FIGURE 13
SEQUENCE OF VIEWS ALONG THE
BAYFRONT GATEWAY



The success of the Bayfront depends heavily on creating a favorable and memorable impression for travelers entering the Bayfront. It is also important that this same strong visual image be carried through the area and provide the means of visually interrelating major Bayfront destinations. Special design attention must therefore be placed on the E Street Approach which serves as both the primary local and regional access route. The text below which is keyed to the sequence of views indicated in Figure 13 and design requirements for this corridor are described in accompanying Figure 14.

1. Street Entry. Provide a dense canopy of trees on both sides of E Street so as to obscure views of the San Diego Gas and Electric power lines and focus views on the immediate landscape of the street. The street trees should be closely spaced and in a regular rhythm to achieve this objective. Immediately west of the freeway future buildings on the north side should be sited and designed to reinforce the sense of entry created by the street trees and existing building mass of Anthony's restaurant. (See Figure 14 for additional details.)

2. Bay Boulevard Entry. A similar sense of entry should be created on the southbound freeway entrance to the Bayfront

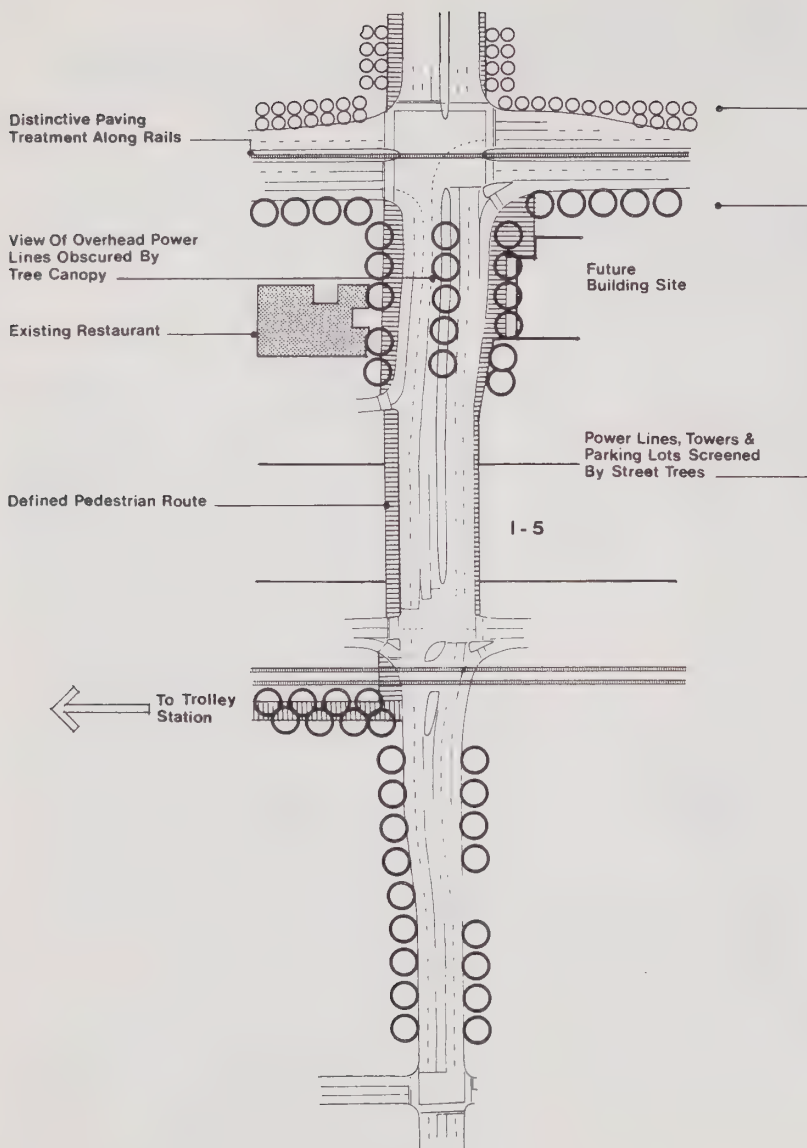


Figure 14. LANDSCAPE CONCEPT AT E-STREET GATEWAY

Figure 14 (along Bay Boulevard). A canopy of trees should be provided along both sides of Bay Boulevard to screen the power lines and transmission towers from view and direct motorists to the E Street intersection. At E Street the Bayfront oriented movement should be accentuated by widening of the roadway along the west side and provision of an additional left turn lane. (See Figure 14 for additional details.)

3. E Street/Bay Boulevard Intersection.

When approaching and crossing Bay Boulevard an axial view terminated by the building mass of commercial structures in the Midbayfront areas should be created. To permit this visual relationship a tower, dome or other vertical form reaching a height of 70 feet should be permitted in the commercial area of Tidelands Avenue.

4. F Street/Tidelands Intersection.

After crossing Tidelands Avenue a channeled view of Vener Pond and Gunpowder Point should be provided by a combination of closely and regularly spaced trees and two to three story building facades along each side.

5. Views to Vener Pond.

The above views should be followed by panoramic views of Vener Pond, Gunpowder Point and San Diego Bay. Major massing of trees should be avoided along the shoreline to protect this view.

6. Views along Levee. From the roadway linking the Midbayfront and Gunpowder Point views should be focused on the hotel complex.

7. Hotel Complex Entry. Upon arrival on the island the view of the hotel complex should be temporarily interrupted by veering the roadway to the right as it passes through the earth berms surrounding the hotel grounds. This should then be followed by an abrupt shift in the roadway and a closeup view of the hotel entryway.

SUBAREA 2—GUNPOWDER POINT

The hotel/conference complex designated for Gunpowder Point is an integral part of the mixed-use concept embodied in the Bayfront Plan. Provision of the hotel, conference and complementary food service uses substantially broadens opportunities for public access and enjoyment of the coastal area. At the same time stringent design and development conditions ensure protection and enhancement of the area's wildlife values. The hotel will generate approximately 200,000 visitor days per year plus additional day use visitors attracted by the restaurant and conference facilities and the pedestrian trail and nature interpretive center located on the eastern shore of the island.

Required design and development conditions are illustrated in Figure 15 and set forth below.

1. Siting. The hotel complex shall be sited in the southernmost portion of the island to avoid conflicts with sensitive natural habitats. The land area to be altered for hotel and conference facility use shall be limited to approximately 14 acres leaving a balance of nearly 27 acres of uplands for restoration as upland natural habitat and designation as wetlands buffer. (See environmental management provisions for more detailed specifications.)

2. Permitted Uses. Permitted uses on Gunpowder Point shall be limited to the following:

Hotel. Hotel room and supporting service space.

Conference. Conference and meeting room space.

Food and Beverage Service. Food and beverage service for hotel guests, conference attendees and the general public.

Retail and Personal Service. Retail and personal service uses primarily serving hotel guest and conference attendees.

Recreation. Recreation facilities primarily for hotel guests including swimming pools, tennis courts, and racquet and squash courts and related clubhouse facilities.

Education. Nature interpretive center.

The level of use shall be limited to a floor area ratio of 0.5 based on a developable land area of 14 acres.

3. Parking. The parking provided for the hotel/conference complex shall be 440 spaces. A reduction in this requirement may be granted if vanpool or limousine service is provided by the hotel operator. A maximum of 220 surface parking spaces may be provided on Gunpowder Point with the remaining balance located in structures over the surface parking, beneath the tennis courts or located remotely in the Midbayfront.

4. Building Height and Form. Building height shall be limited to eight stories with conditional approval of 12 stories if it can be demonstrated that the increase in height produces a visually and environmentally superior solution. Linear slab or cruciform structures of a uniform height should be avoided; stepped building forms

should instead be used to provide a better visual fit with the land form of Gunpowder Point. The building form should envelop a south facing public outdoor space as shown in the design and development guidelines and illustrative plan, Figure 15.

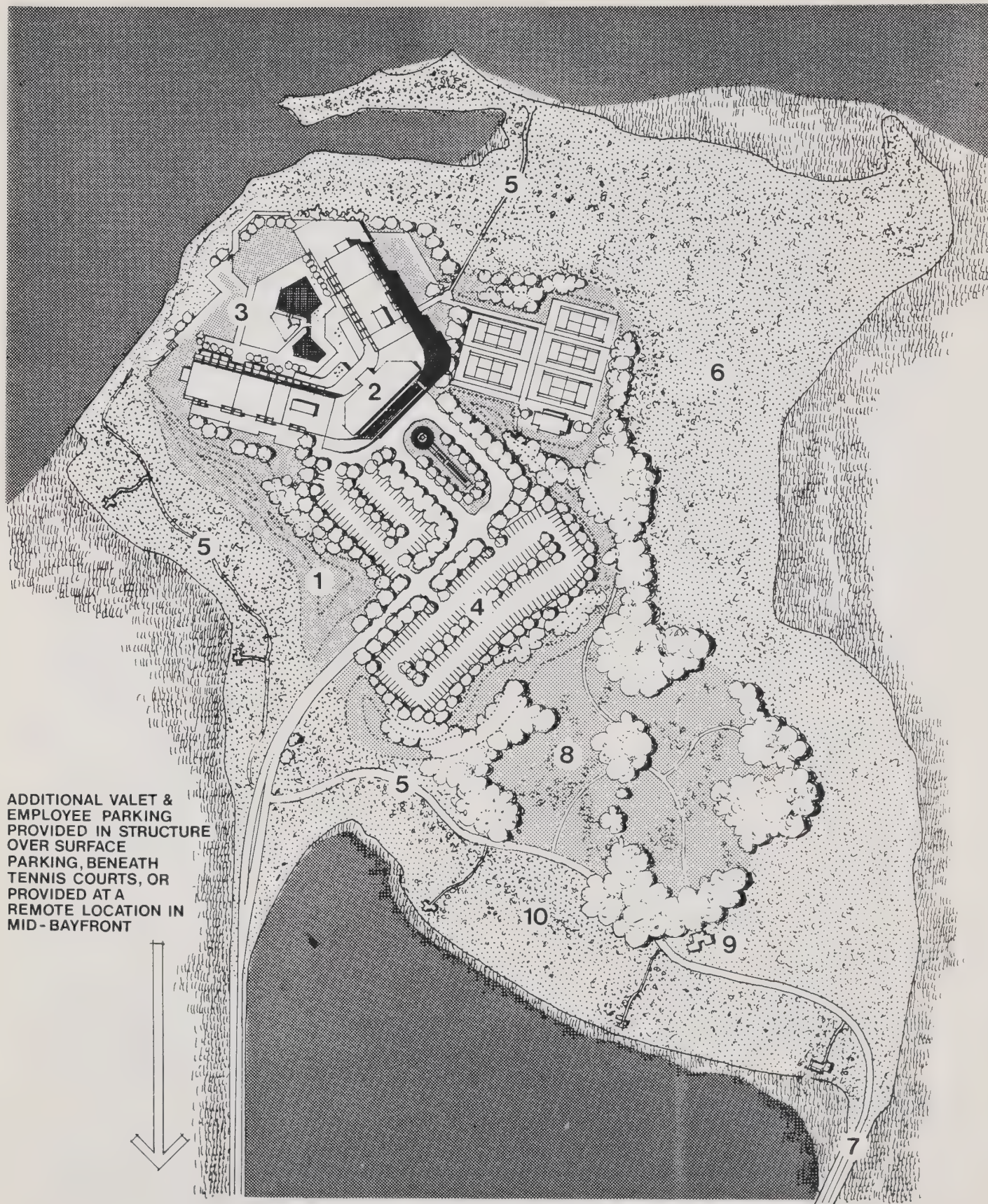
5. Landscaping. The landscaping of Gunpowder Point consists of three major elements: (1) natural habitats to be protected and enhanced; (2) buffering landscaping between restored upland habitat and hotel complex; and (3) internal landscaping of the hotel complex. Natural habitat protection and enhancement required are specified in Chapter III, Environmental Management. Conditions governing the latter two are set forth below.

Buffer Zone Between Hotel/Conference Complex and Upland Habitat. An earth berm, with an elevation 5 to 7 feet higher than the adjoining upland habitat, should surround the hotel/conference complex on the east, north and west side. The berm should be designed to screen the parking, recreation facilities, landscaped hotel grounds and lower portions of the hotel structure from the revegetated upland reserve. The outward facing surfaces of the berm should be planted with the southern coastal scrub or other appropriate upland vegetation to provide for its visual integration with the adjoining uplands.

Legend

- 1 EARTH BERM ENCLOSING APPROXIMATELY 14 ACRES.
- 2 APPROXIMATE SITING OF HOTEL/CONFERENCE STRUCTURE. STEPPED BUILDING FORM TO BE USED TO VISUALLY INTEGRATE STRUCTURE WITH NATURAL SETTING. BUILDING HEIGHT LIMITED TO 8 STORIES WITH CONDITIONAL APPROVAL UP TO 12 STORIES.
- 3 SOUTH ORIENTED PUBLIC SPACE DESIGNED FOR INTENSIVE USE.
- 4 HOTEL/CONFERENCE PARKING LIMITED TO 220 SPACES.
- 5 LIMITED PEDESTRIAN ACCESS.
- 6 16.8 ACRE REVEGETATED UPLAND HABITAT.
- 7 EMERGENCY ACCESS ROUTE.
- 8 APPROXIMATELY SIX ACRES OF LANDSCAPED COMMUNITY PARK WITH PASSIVE RECREATION IMPROVEMENTS.
- 9 INTERPRETIVE CENTER.
- 10 SHORELINE TRAIL ZONE FOR LIMITED PUBLIC ACCESS AND WILDLIFE OBSERVATION.

**Figure 15. GUNPOWDER POINT HOTEL DESIGN
AND DEVELOPMENT GUIDELINES**



ADDITIONAL VALET &
EMPLOYEE PARKING
PROVIDED IN STRUCTURE
OVER SURFACE
PARKING, BENEATH
TENNIS COURTS, OR
PROVIDED AT A
REMOTE LOCATION IN
MID-BAYFRONT

Figure 15. GUNPOWDER POINT HOTEL
ILLUSTRATIVE PLAN



Internal Landscaping of Hotel/Conference Complex. Within the area surrounded by the earth berm a greater variety of landscape materials may be employed. The following guidelines should be observed.

- Within the entry zones (approach, roadway and parking area) large scale trees, planted in an irregular, informal pattern should visually define the approach to the hotel, screen view of the parking from the upper floors of the hotel, and in conjunction with ground covers and change in elevation conceal parking from view of arriving and departing hotel guests. Additionally this landscaping will serve to further visually separate the hotel/conference complex from the adjoining upland.
- If illumination is provided for outdoor recreational facilities, a combination of low mounted luminaries and intervening tree masses should be used to reduce night-time intrusion of light into the adjoining upland habitat.
- A large-scale south-oriented outdoor area should be provided for users of the hotel/conference complex. (See Figure 15.) Within this area a wide variety of landscape materials are permissible and a highly contrasting appearance with other open spaces on Gunpowder Point is desirable. An abrupt change in appearance with this ornamental landscape adjacent to the hotel should be provided along the south facing shoreline by revegetation of a 100 foot strip with native vegetation.

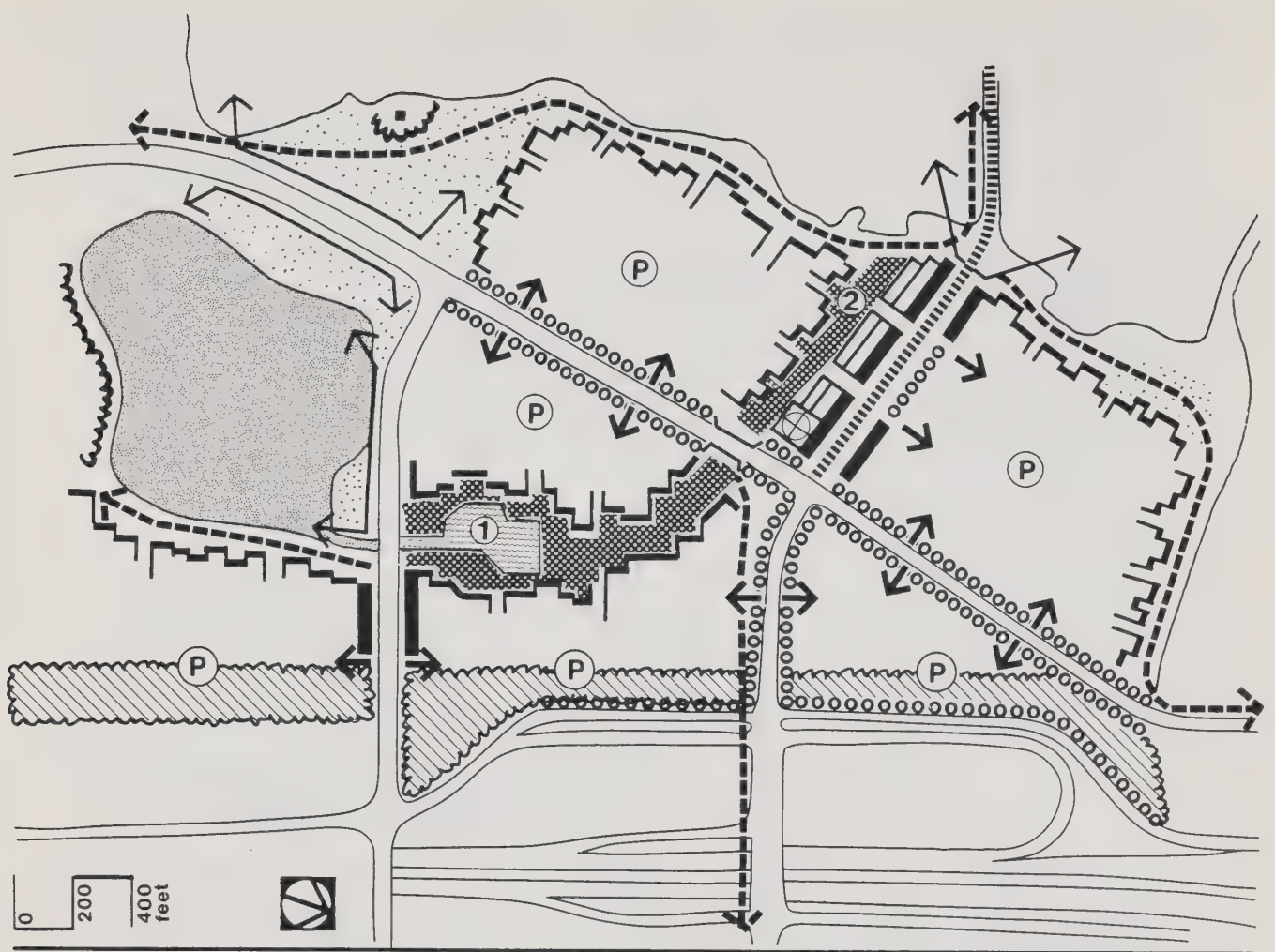
6. Public Access. Public access shall be provided to Gunpowder Point via the pedestrian boardwalk incorporated into the south levee roadway. A series of publicly accessible outlooks should be provided to allow visual access to the wetland habitat areas with minimal intrusion. Outlooks should be designed similar to photographic blinds to achieve this end.

MIDBAYFRONT

Figure 16 diagrams the specific design and development guidelines for the Midbayfront. Major objectives addressed are: (1) provision of pedestrian system integrating all the activities of the Midbayfront and linking the area with contiguous areas of the Bayfront and the proposed E Street trolley station; (2) provision of a system of open space which serves as a major recreational resource, a means of enhancing the visual appearance and image of the area and a method for integrating and unifying development throughout the area; and (3) establishment of visually and functionally satisfying relationships between buildings, open space and roadway and parking areas.

1. Pedestrian Continuity. Internal pedestrian circulation should regularly connect with the main perimeter circulation along the wetland buffers. Architectural facades adjacent to the shoreline should be frequently broken to allow for ground level circulation. A major pedestrian link should be included in the public open space linking the shoreline with the interior storm detention facility. Provision should be made for pedestrian continuity across or beneath Tidlands Avenue.

2. Access to Individual Development Sites. The main auto access points to the Midbayfront development parcels are shown on Figure 16. They are generally limited by circulation constraints imposed by traffic and roadway functions, by utility corridors, and by open space corridors. Internal automobile circulation should be minimized to locate parking reservoirs close to points of access but not adjacent to major open spaces.



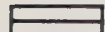
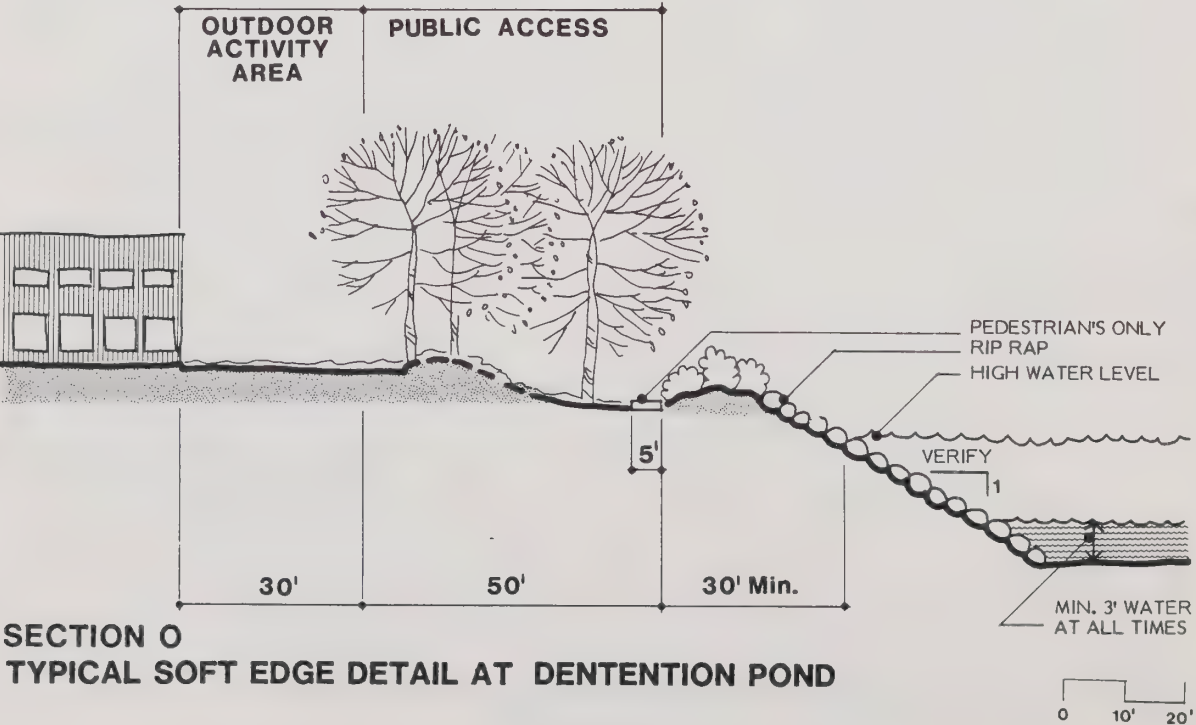
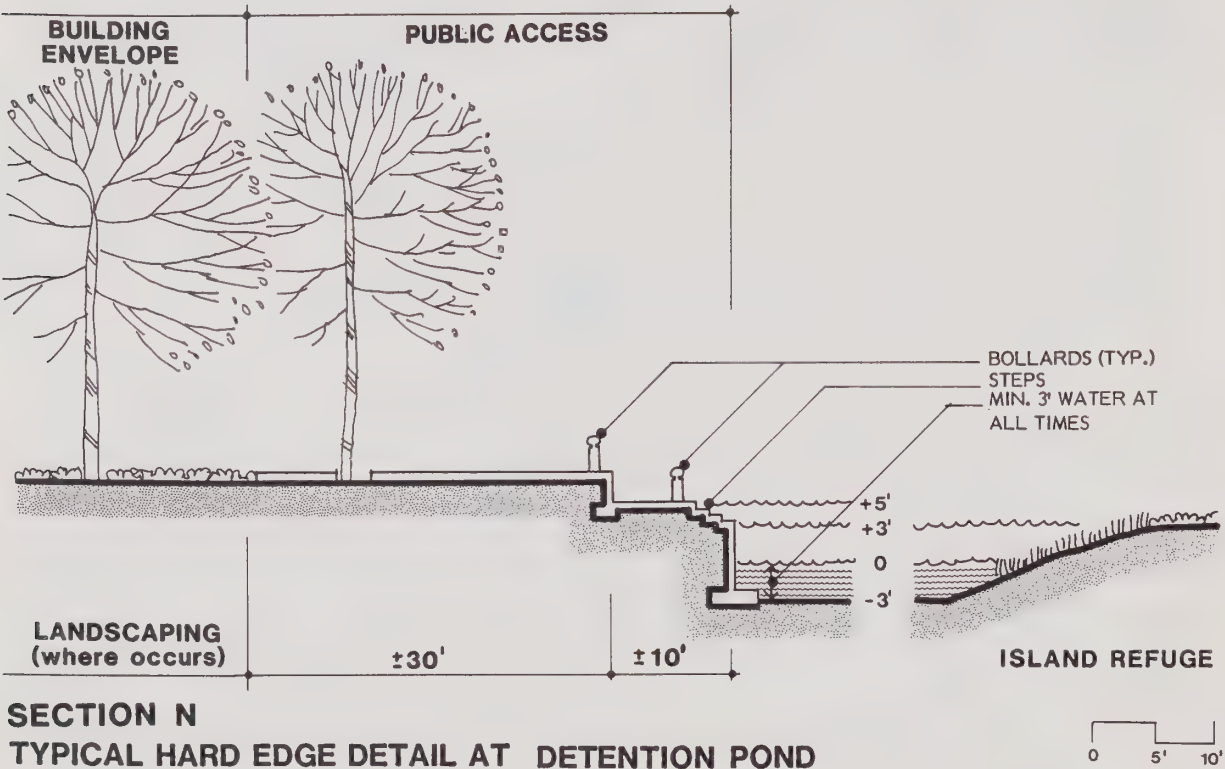
- | | | | |
|--|--|---|--|
|  | FACETED BUILDING FRONTAGE |  | PANORAMIC VIEWS TO BE RETAINED AND ENHANCED |
|  | STEPPED BUILDING FORM |  | RESTRICTED AUTO ACCESS |
|  | VERTICAL BUILDING FORM
(APPROXIMATE HEIGHT 70 FEET) |  | ACCESS TO PARKING—LIMIT POINTS OF INGRESS AND EGRESS |
|  | BUILDINGS SITED TO DEFINE MAJOR PUBLIC SPACES AND/OR ENTRANCES |  | MAJOR PARKING AREAS |
|  | MID-BAYFRONT OPEN SPACE SPINE - DESIGN FOR INTENSIVE USE |  | MAJOR PEDESTRIAN LINKS TO OTHER BAYFRONT/CITY AREAS |
|  | SDG & E CORRIDOR—PARKING AND INTENSIVE LANDSCAPING |  | DETENTION POND—DEVELOP AS PERMANENT WATER FEATURE. USE AS CENTRAL LANDSCAPE ELEMENT. |
|  | LARGE SCALE, REGULARLY SPACED STREET TREES |  | ORIENT MAJOR SPECIALITY RETAIL TO OPEN SPACE. INCORPORATE GROUND LEVEL RETAIL ALONG NORTH EDGE OF RESIDENTIALLY DESIGNATED AREA. |
|  | LANDSCAPE MASKING OF VISUALLY DISCORDANT STRUCTURES | | |
|  | PARK SPACE | | |

Figure 16. MID-BAYFRONT SPECIFIC DESIGN AND DEVELOPMENT GUIDELINES

3. Building/Open Space Relationships. Figure 16 specifies the relationship of buildings to major public outdoor spaces. It is recommended that the storm drainage pond be developed as a landscape feature in the public open space corridor and adjacent development sites orient their structures to face this landscape amenity. (See Sections N and O.) A landmark building site is specified to provide a major identifying feature for the Midbayfront. Additionally, special siting requirements for structures at the F Street approach and approach to Gunpowder Point are specified.



4. Enhancement of Visual Character. A number of specific landscape improvements are proposed to ameliorate existing physical features. These include landscape screening surrounding the existing small-scale industrial activity, located in the public open space zone at the foot of F Street, and landscape massing beneath the SDG & E power lines, and street tree planting along the major travel routes.

SUBAREA I—D STREET FILL

This area is important for its habitat values, scenic values and waterfront recreation opportunities. Additionally, its locational features, namely its proximity and visibility to the planned Route 54 freeway improvements and siting along the planned Sweetwater Flood Control project, also dictate careful attention to both natural resource protection and development opportunities. Land contained in this subarea is solely owned by the Santa Fe Railroad. Issues of coordination of conservation and development actions, however, are posed by contiguous lands owned by the San Diego Unified Port District and the irregular property line established by the tidelands grant to the Port. To facilitate development, the irregular boundaries may be modified by a land exchange between the Port and the landowner.

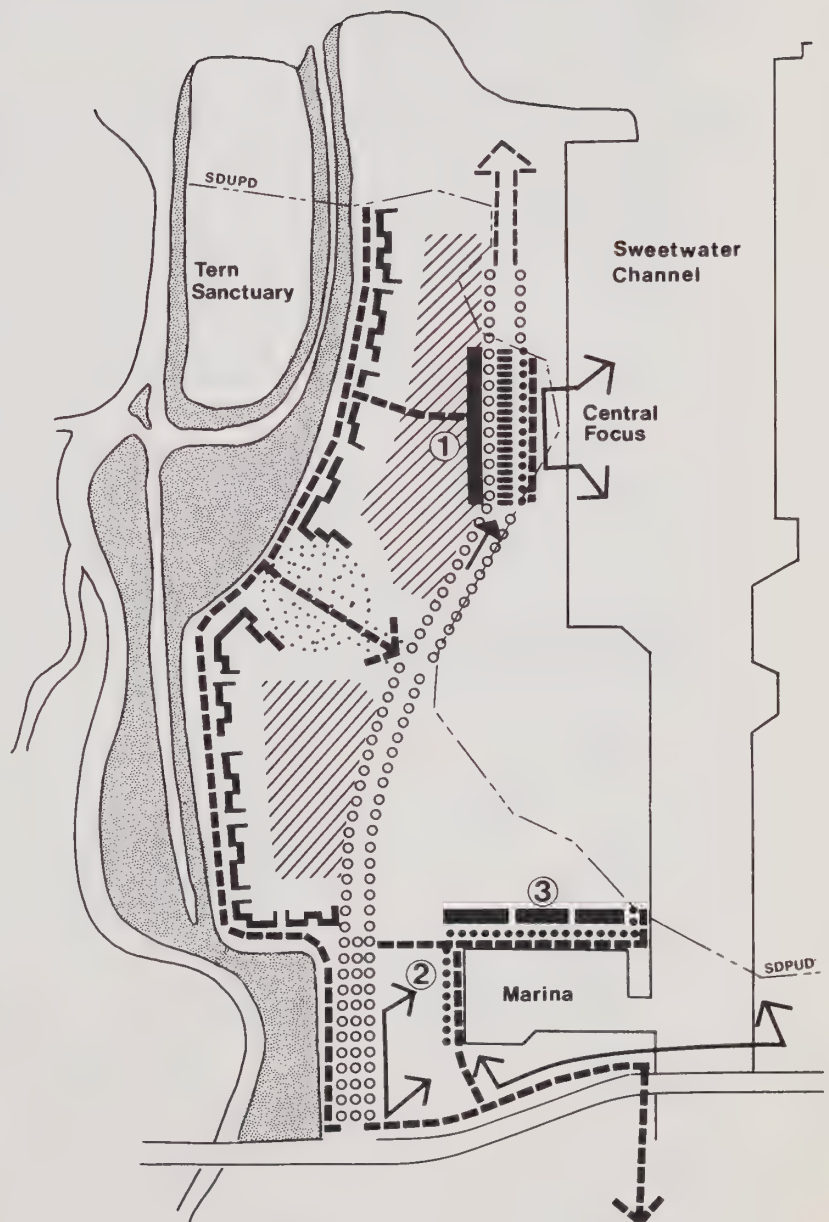
The provisions below elaborate on the land use, circulation, environmental management, and form and appearance provisions of Chapter III. Special attention is placed on the integration of development and land use on the Santa Fe and Port lands. The D Street area is divided into four major segments, the Least Tern Sanctuary described in detail in the environmental management section and three major development areas including: (1) the East Marina area adjoining the proposed Tidelands Avenue bridge crossing of the Sweetwater channel; (2) the housing areas along the southwest edge; and (3) the Central Focus area along the western section of the channel. Provisions for each of these segments are described below.

1. East Marina Area. Provisions are made for dredging and creation of a small boat marina accommodating approximately 200 boats. The area is designated as a development reserve in the land use section so as to permit flexibility to adapt to recreation and economic opportunities generated by other D Street area improvements. Two land use options are retained: (1) development of a marina oriented residential community incorporating limited retail and marina related commercial space; and (2) a marina commercial complex including such activities as small boat repair and construction, boat sales and marina related retail activities. Selection among these two options is both dependent upon market factors and development decisions made by the Port for its contiguous and intricately related property.

Under either of these land use options several basic design and development guidelines should be adhered to. The basic concepts are shown in Figure 17 and expanded upon below.

Views. Provide views of the marina from both the Tidelands Avenue Bridge, which will have a height of 45 feet above mean high tide as it crosses the channel, and from the major arterial approach to the D Street area.

-  FOUR STORY STRUCTURES
-  FACETED BUILDING FACADES—TWO STORY STRUCTURES
-  VISUALLY PROMINENT BUILDING MASS STRONGLY DEFINED ARCHITECTURAL EDGE (5 STORIES PERMISSIBLE)
-  URBAN PROMENADE—INTEGRATE WITH SIMILAR TREATMENT ON PORT LANDS
-  LARGE SCALE, REGULARLY SPACED STREET TREES—NO MEDIAN TREES
-  LARGE SCALE, REGULARLY SPACED STREET TREES—WITH MEDIAN TREES
-  PUBLIC PARK
-  PEDESTRIAN WAY—COORDINATE WITH PEDESTRIAN WAYS ON PORT LANDS
-  SPECIAL PAVEMENT TREATMENT
-  FOCUSED ROADWAY VIEW OF INNER HARBOR
-  PANORAMIC VIEWS
- ① SEE SECTION R
- ② SEE SECTION P
- ③ SEE SECTION Q



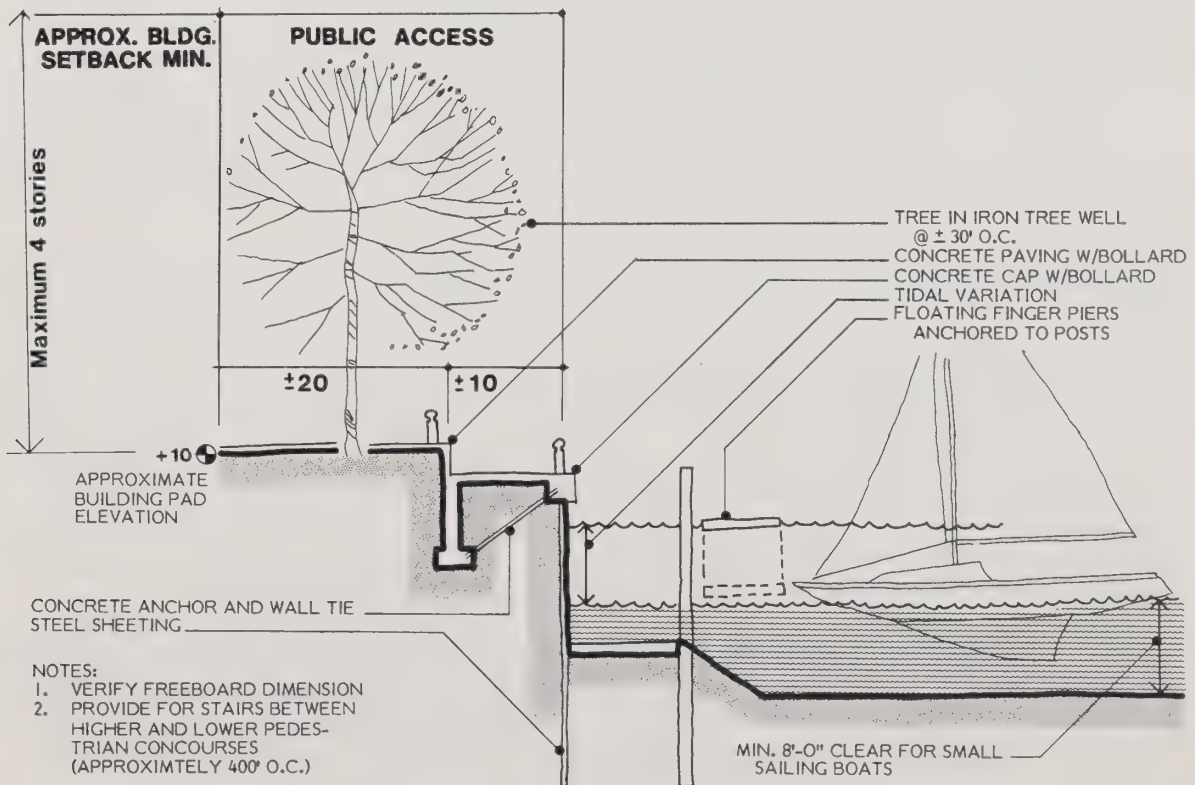
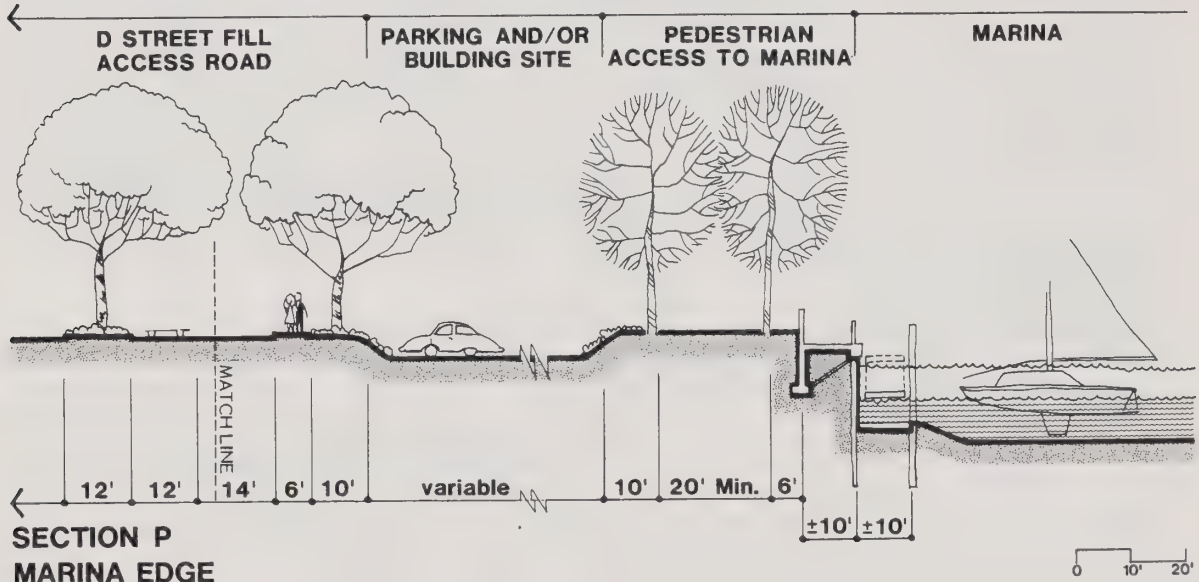
0 200 400 800 feet



Figure 17. D STREET FILL SPECIFIC DESIGN AND DEVELOPMENT GUIDELINES

Public Access. Provide for public access along the south and west edges of the marina by construction of a pedestrian promenade. (See Section P.) Integrate with a pedestrianway in conjunction with the Port's Plan.

Architectural Edge. Develop a strongly defined architectural edge along the west edge of the marina. Buildings along this edge may be constructed to a height of five stories. A comfortably scaled pedestrian space should be created by siting the buildings approximately 80 feet from the water's edge and by stepping the facing buildings back after the third story. (See Section Q.)



2. Southwest Housing Area. Approximately 19 acres are designated in the southwest portion for housing with a maximum permitted density of 30 dwelling units per acre. Conditions to be adhered to are shown in Figure 17 and indicated below.

Buffer Setback. Structures shall be sited 100 feet or more from the marshlands as defined in the environmental management provisions.

Architectural Edge. Buildings facing onto the marsh buffer zone should be designed and sited to present a broken, variegated edge facing the marsh, rather than a continuous flat-wall effect. Building heights should not exceed two stories along this edge.

Landscaping. Tree planting and landscaping within the immediate residential area bordering the buffer should be a semi-transparent screen to allow some views out over the marsh while still breaking up the geometric shapes of the structures.

Colors. To prevent too-harsh contrast to the marsh area natural building materials and muted earth colors should predominate.

Building Heights. Higher building heights up to four stories, if parking is provide on the first level, should be permitted for structures sited a distance of 150 feet or more from the buffer zone. (See Figure 15.)

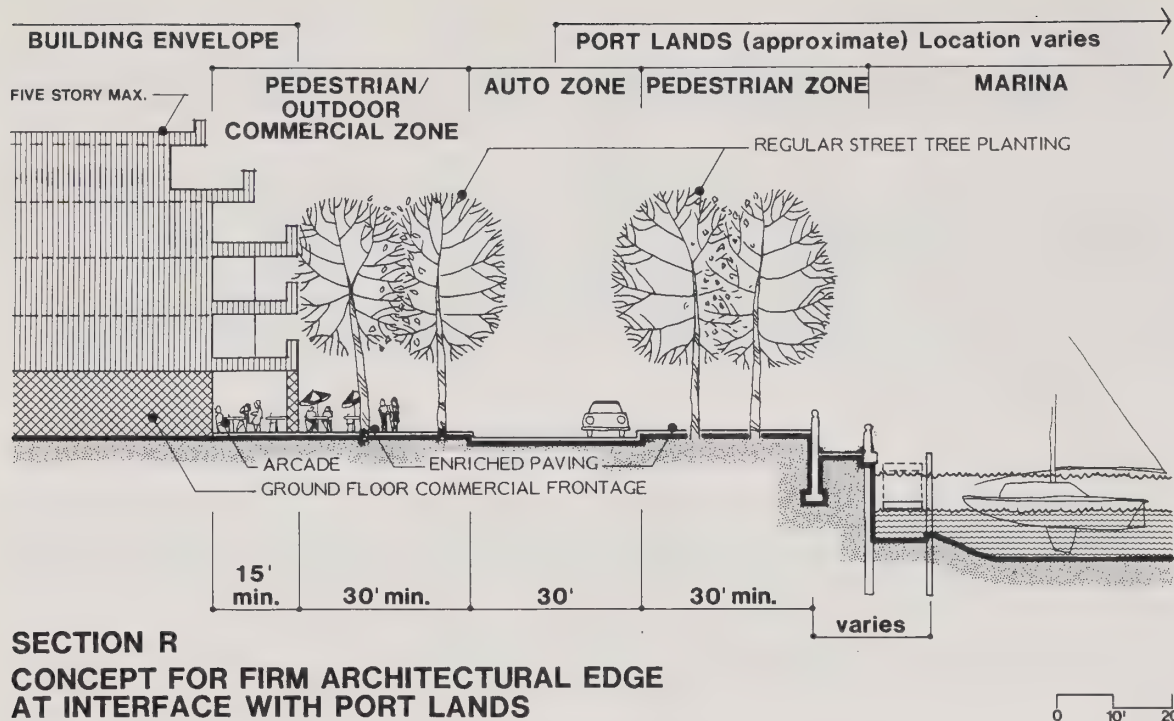
Park. A centrally located park should be provided for both use of residents and the general public. A park area of approximately three acres should be provided. The park should be sited and designed to provide a landscape focus for the residential area while also serving as an open space connection between the east and west sides of the D Street area.

3. Sweetwater Channel. Reconciliation of land use and development on Port and private lands is particularly critical in the mid-segment of the Sweetwater Channel. At this point the irregular and meandering property line makes it virtually impossible to achieve a harmonious development pattern unless there is cooperative action by the City, Port and private property owner. To promote this end the following guidelines should be adhered to.

Exposure to Sweetwater Channel. Public physical and visual exposure to the Sweetwater Channel shall be provided from the major east-west arterial shown in Figure 17.

Visual and Functional Center. The point of convergence of Port and private lands and the Channel should serve as the primary visual and functional center of the D Street area. Development on the Channel side should accommodate water-related uses such as restaurants, boat berths, small boat sales and repairs which serve the general public and contribute to an urban waterfront appearance for the area. This development should be sited and designed to protect and enhance water-oriented views of properties on the south side of the roadway. (See Section R)

Dominant Structures. Development along the south side of the roadway (see Figure 17) should visually dominate other structures in the D Street area and be oriented in both views and use to the Sweetwater Channel. A mix of uses including ground level retail and upper floor residential, office and motel uses is desirable.



Public Promenade. A public promenade should be provided along the Channel edge and integrated with a pedestrianway in conjunction with development on the Port lands to the east and west. As shown in Section R, the promenade should be integrated with the roadway and south side development and constructed to impart a lively, urban appearance.

SUBAREA 5—INDUSTRIAL ZONE

The primary use in this subarea is the Rohr Industries facility. Modifications to Rohr's operations or building program should be accompanied with an overall landscape master plan. The landscape master plan should provide for necessary screening of on-site parking and storage areas, the establishment of foreground planting for major structures to provide a human scale to the large undifferentiated walls, and a detailed schedule on proposed landscape improvements included in the master plan.

SUBAREA 6—SOUTHERN AND INLAND PARCELS

SOUTHERN PARCEL

The southern parcel is located south of L Street and west of Interstate Route 5. This area is within the Coastal Zone but is not covered by the Bayfront Plan. The entire area contains approximately 90 acres. The majority of this area (65 acres) is part of the SDG &E generating plant. In addition, there is a small area (4 acres) which is used as part of the salt works, and an area (21 acres) which is vacant.

According to an existing agreement among the State, National City, and the salt

marsh operator, the salt works will be incorporated into a State wildlife preserve over a twenty year period.

The remaining area is designated for industrial use on the General Plan and is zoned I (Industrially). No change in these designations is proposed.

It is anticipated that the SDG & E facility will remain in operation on a permanent basis, while the salt works will continue into the foreseeable future. The vacant industrial land is located between Bay Boulevard and Interstate 5 and does not have any direct Bay frontage. It would be undesirable to locate any visitor-serving facilities here because of the proximity of the freeway and the generating plant. In addition, no uses should be located on this property which would economically compete with the Bayfront.

INLAND PARCEL

The inland parcel is located north of C Street and west of Broadway (National Avenue). This area contains approximately 80 acres. A major portion of this area will be used for Route 54 and the Sweetwater River Channel, and the remainder for industrial purposes.

The property is designated for research and limited industrial uses in the General Plan and is zoned F-I (Flooding) and I-L (Light Industrial).

This area is not coastal-related and no change in the existing designations are anticipated.

V. DISCUSSION OF COASTAL POLICIES

This chapter is organized in accordance with the 14 policy categories identified in the California Coastal Commission Local Coastal Program Manual. Under each category first the coastal policies pertaining to that category are summarized followed by a discussion of the existing conditions which pertain to that policy category and the land use plan provisions proposed to meet the conditions of the policies.

SHORELINE ACCESS

COASTAL ACT POLICIES

Sections 30210-30212 of the Coastal Act require that public access and recreational opportunities be provided for all the people, that development not interfere with the public's right of access, and that new development provide public access to the shoreline.

EXISTING CONDITIONS

There is currently limited public access to Chula Vista's shoreline. The San Diego Unified Port District Boat Launch and Park located off the westerly extension of J Street outside the Bayfront Plan area provides the only nearby public access to the bay. Except for Rohr Corporation and some mixed commercial development immediately adjacent to the freeway, the entire Bayfront area is vacant. The only public road which extends to the waterfront is F Street. No lateral access extends from the end of F Street. The D Street Fill, Gunpowder Point, the Sweetwater Marsh, and the Vener Farm are completely closed to public use.

PLAN PROVISIONS

Public access to the shoreline is one of the key provisions of the Bayfront Plan. The Plan provides 31 acres of public park and another 33.8 acres of wetland buffer to which a portion is accessible to the public. A total of 3.2 miles of shoreline access is provided. The Plan opens up far more shoreline to the public than is currently accessible. All shoreline access areas will be permanently dedicated and maintained to assure future access.

The Plan provides for public accessibility through its series of shoreline parks and wetland buffer zones and the pedestrian, bicycle, and auto parking areas provided within or adjacent to the shoreline linear park system. It also provides for public accessibility by incorporation of public oriented commercial uses into the Bayfront. The following list references the key objectives and provisions within the Plan which address the issue of protection or enhancement of shoreline access and summarizes them:

I. Basic Land Use Objectives (Chapter III)

- Objective I--Mixed Use. "Mixed use development will be encouraged to provide maximum utilization of the waterfront resource and to achieve a waterfront with increased accessibility compatible with natural resources."

- Objective 6--Public Open Space. "Ample opportunities should be provided for public open space and community and neighborhood parks adjacent to the natural environmental resources of the Bayfront to increase public access to the waterfront. While a number of access opportunities should be provided, including pedestrian, bicycle, and visual access from both adjacent development and major automobile circulation routes, care should be taken to protect wildlife resources from disruptive intrusion."

2. Permitted Uses (Chapter III)

- Provision 6--Wetland Buffers. "This land use designation includes the upland buffer zone adjacent to the wetland areas required for habitat protection to preserve the health and vitality of the adjacent wetland ecosystem. Permitted uses in the buffer zones include provisions for controlled public access, minor grading and landscaping, and minor scientific or educational uses."
- Provision 6--Parks. "A series of community or neighborhood parks are proposed for recreational uses throughout the Bayfront. Limited parking would be provided at several of the parks and all would be linked via a continuous publically accessible pedestrian system."

3. Basic Circulation Objectives (Chapter III)

- Objective 3. "Create auto-free zones along the shoreline and other areas which have unique environmental conditions or potential, and make provision for pedestrians and bicyclists."
- Objective 8. "Provide for convenient pedestrian, bicycle and vehicular access to the Bayfront from community areas east of Interstate 5."

4. Pedestrian and Bicycle Routes (Chapter III)

- Provision 1. "Continuous shoreline access is provided within the 100 foot upland area designated as the wetland buffers in the Environmental Management element of the plan. It is envisioned that a continuous, improved public path will be provided that is integrated into minor landscape improvements to the buffer. The combination of landscape screening, and out-looks adjacent to the wetlands will provide a significant recreational resource without undue impact on the wildlife resources."

RECREATION AND VISITOR-SERVING FACILITIES

COASTAL ACT POLICIES

Sections 30212.5, 30213 (part, 30220-30223, and 30250(c)) of the Coastal Act require the provision of public and low-cost recreation and visitor-serving facilities, and encourage the provision of commercial recreational and visitor-serving facilities by requiring that suitable land be reserved for such uses and that such uses be given priority over other uses.

EXISTING CONDITIONS

Except for one motel and two restaurants located along the freeway on Bay Boulevard there are no recreation or visitor serving facilities currently located within the Chula Vista Bayfront planning area.

PLAN PROVISIONS

The Plan provides for 64.8 acres (excluding marsh) of public open space which provides low cost recreational opportunities. In addition, 49 acres of a total of 192 acres of the developable land (25 percent) is proposed as visitor serving development such as specialty retail, marina, marine commercial, and highway commercial. These visitor serving facilities are estimated to draw approximately 7.3 million visitor-person days a year (assuming development reserve is non visitor-serving). (See Appendix B.)

The following list references the key objectives and provisions within the Plan which address the issue of recreation and visitor-serving facilities within the Bayfront and summarizes them:

1. Basic Land Use Objectives (Chapter III)

- Objective 6--Public Open Space. "Ample opportunities should be provided for public open space and community and neighborhood parks adjacent to the natural resources of the Bayfront to increase public access to the waterfront. While a number of access opportunities should be provided, including pedestrian, bicycle, and visual access from both adjacent development and major automobile circulation routes, care should be taken to protect wildlife resources from disruptive intrusion."

2. Permitted Uses (Chapter III)

- Provision 5--Marine Related. "This land use designation includes commercial uses directly related to waterfront activities. Permitted uses include (1) retail sales: eating and drinking establishments, food and beverage sales, ship chandleries, boating and yachting sales; (2) business and personal services: repair services catering to boat or marina needs and limited ship repair facilities appropriate to the scale of the land resource and adjacent uses; (3) boat marinas or haul-out areas."
- Provision 5--Specialty Retail. "This land use designation includes retail uses for support of the hotel-conference facility, adjacent office park uses, and adjacent residential uses. Additional uses may include those that would provide a regional attraction but not compete with the general commercial services of the Chula Vista downtown. Permitted uses include (1) retail sales: convenience retail, eating and drinking establishments, and food and beverage sales; (2) business and personal services: business support services, communications services, entertainment, finance, insurance, and real estate services, and (3) personal and repair services."
- Provision 5--Hotel. "This land use designation refers to a destination resort hotel with conference facilities. Included in the permitted land uses are recreational facilities necessary to support the hotel function and on site parking for 440 cars." (A maximum of 220 surface parking places with the remaining in structure or remotely located).
- Provision 6--Wetland Buffers. "This land use designation includes the upland buffer zone adjacent to the wetland areas required for habitat protection to preserve the health and vitality of the adjacent wetland ecosystem. Permitted uses in the buffer zones include provisions for controlled public access, minor

grading and landscaping, and minor scientific or educational uses. Provision has been made for an interpretive center to be established within the buffer zone at one of three alternative locations as indicated on the Environmental Management Map, Figure 11."

- Provision 6--Parks. "A series of community or neighborhood parks are proposed for recreational uses throughout the Bayfront. Limited parking would be provided at several of the parks, and all would be linked via a continuous, publicly accessible pedestrian system. Allocation: 31 acres (3.9 percent)."

WATER AND MARINE RESOURCES

COASTAL ACT POLICIES

Sections 30230, 30231, and 30236 of the Coastal Act require the preservation where feasible, the enhancement and restoration of water and marine resources including coastal waters, streams, wetlands, estuaries, and lakes. Special protection shall be given to areas and species of special biological or economic significance.

EXISTING CONDITIONS

The Chula Vista Bayfront contains substantial and significant marshlands, mudflats, and uplands and represents one of the last remaining major wetlands in the San Diego Bay Area. These wetland areas provide habitat and nesting sites for a wide range of species including 3 endangered species, the California Least Tern, the Light Footed Clapper Rail, and the Belding's Savannah Sparrow.

The marshlands within the Chula Vista Bayfront area comprise a total of about 200 acres as outlined below:¹

● Sweetwater Marsh	120 acres
● Paradise Creek Channel Area	15 acres
● Vener Pond	15 acres
● Vener ("E" Street) Marsh	34 acres
● "F/G" Street Marsh	15 acres
● Freshwater ("remnant") Marsh	1 acre

PLAN PROVISIONS

The Plan provides for the permanent protection of over 222 acres of wetlands including Sweetwater Marsh, F-G Street Marsh, E Street Marsh, Vener Pond, and the connector marsh between Sweetwater and Paradise Marshes. Included in this total is the provision for the enhancement or restoration of approximately 8.9 acres of degraded marsh and the creation of approximately 9.6 acres of new wetland by converting upland to wetland.

The Plan calls for 39 percent of the total Bayfront to be dedicated as open space. Of this open space 72 percent is totally protected as natural habitat with human

¹ These approximate values do not include mudflats along San Diego Bay, and are derived from the U.S. Army Corps of Engineers (1977) Draft Environmental Impact Statement on the proposed Sweetwater River flood control channel project.

encroachment limited to scientific research. Twenty-eight (28) percent of the open space is partially protected, with human activity limited to bicycle and pedestrian paths for wildlife viewing.

The Plan does call for some fill within the Sweetwater Marsh along the existing railroad levee in order to connect Tidelands Avenue to the D Street Fill. Although the Tidelands Connection would cause filling of wetland areas it would help to improve the quality of the wetlands east of the railroad. By removing some fill within an existing levee the adjacent wetlands will be subject to improved tidal flushing.

Wildlife populations (primarily birds) utilizing the wetlands have been protected from physical and visual intrusion by careful location and siting of developable areas and creating functional buffers.

The following list references the key objectives and provisions within the Plan which address the issue of water and marine resource protection:

1. Basic Land Use Objectives (Chapter III)

- Objective 5--Wetland Protection and Enhancement. "The existing saltwater marshes, ponds, and mudflats should be preserved and enhanced where appropriate to protect the many natural resource values in the habitat and contribute to the visual quality of the Bayfront."

2. Permitted Uses (Chapter III)

- Provision 6--Wetlands. "This land use designation includes all the existing restored or enhanced salt marshes, ponds, and mudflats that generally fall below the mean high tide line, (datum 4.89 feet) and are periodically subject to tidal action. No use is proposed beyond natural habitat protection and minor scientific or educational uses. Allocation: 222.3 acres (28.1 percent)."
- Provision 6--Wetland Buffers. "This land use designation includes the upland buffer zone adjacent to the wetland areas required for habitat protection to preserve the health and vitality of the adjacent wetland ecosystem. Permitted uses in the buffer zones include provisions for controlled public access, minor grading and landscaping, and minor scientific or educational uses. Provision has been made for an interpretive center to be established within the buffer zone at one of three alternative locations as indicated on the Environmental Management Map, Figure 11."
- Provision 6--Upland Resources. "This land use designation includes the remaining upland habitat areas included within the Environmental Management zone. These are (1) the Least Tern reserve, and (2) the upland revegetation zone on Gunpowder Point. No uses are permitted on the Least Tern reserve except for minor scientific or educational uses. The Upland Revegetation Zone on Gunpowder Point will be accessible to pedestrians but not improved for specific or educational uses. Allocation: 22.9 acres (2.9 percent)."

3. Basic Circulation Objectives (Chapter III)

- Objective 2. "Route design roadways in a manner which minimizes adverse affects on valuable marshlands."

4. Proposed Roadways (Chapter III)

- Provision 1--Tidelands Avenue/F-G Street Marsh. The alignment of Tidelands Avenue within the Port District's property is proposed to move westerly to by-pass the present edge of the existing F-G Marsh. This relocation of the right-of-way will (1) permit Rohr Corporation to consolidate more of its operations on the east side of Tidelands Avenue so that traffic on Tidelands will not interfere with its internal circulation patterns, (2) completely by-pass the F-G Marsh, and (3) introduce significant views to the waterfront from the moving automobile.
- Provision 5--Access to Gunpowder Point. Access to Gunpowder Point is a key element of the circulation plan. The link between the hotel/conference facility on the Point and the rest of the Bayfront is via two existing levees. The main access is proposed to be on the southern levee. In order to minimally disrupt wildlife using the adjacent wetlands, it is proposed to provide a 20 foot wide controlled access roadway on the southern levee. As indicated in Section G, the two lane road can be integrated into the levee without undue impact on the adjacent marshes. In order to raise the roadbed above the 10 foot elevation, it is proposed to provide structural reinforcement, or some equivalent reinforced sloped embankment that minimizes impact on wetland resources, (fill would result only for minor engineering requirements to assure road safety). A boardwalk is included as part of the roadway section but adjacent to the E Street Marsh side only. In addition, screen planting is proposed to reduce the impact on Vener Pond from automobile traffic and to shield the wetlands from the street lighting incorporated into the guard rail.

A secondary access to Gunpowder Point is proposed only as an emergency route with a crash gate located on the levee as shown in the Circulation Map, Figure 6. The proposed improvements for this emergency road provide for a soft-surfaced road bed and a bridge structure over the breached section of the levee. No changes in the tidal interaction between the pond and Sweetwater Marsh are envisioned.

5. Basic Utility Service and Grading Objectives (Chapter III)

- Objective 3. "Protect existing natural resources from undue impact during the construction phases."
- Objective 4. "Provide for an adequate on-site storm drainage system to preclude drainage directly into wetland habitat without adequate filtering of sediments or pollutants."

6. Basic Environmental Management Objectives (Chapter III)

- Objective 1. "Provide for the long-term protection of the critical natural habitat areas by cooperating in a multi-jurisdictional planning and implementation program with adequate safeguards and guarantees."
- Objective 2. "Incorporate the mitigation requirements of the Caltrans/Corps joint highway and flood control project into the environmental management provisions of the Chula Vista Bayfront Land Use Plan so that land development and resource protection measures will be complementary."

- Objective 3. "Maintain coordination with the San Diego Unified Port District in the development of plans and programs for areas adjacent to the Chula Vista Bayfront to assure that environmental management objectives in the Bayfront Land Use Plan can be successfully implemented."

7. Detailed Environmental Management Provisions (Chapter III)

- Provisions--D Street Fill. The Land Use Plan proposes to create a Least Tern Sanctuary jointly on privately held lands within the Bayfront planning area and on Port owned lands adjacent but outside the planning area. (See Figure 11.)

The required provision for 9.6 acres of upland conversion to wetland by Caltrans shall be located adjacent to the Sweetwater marsh and generally east of the proposed Least Tern Sanctuary. (See Figure 11.)

The 100 foot wide buffer to be acquired as part of the Caltrans/Corps project mitigation requirements shall be configured to protect the existing Sweetwater Marsh edge and the proposed new wetland. (See Figure 11.)

- Provisions--Gunpowder Point. Development on Gunpowder Point will be limited to an approximately 14 acre area within a zone furthest removed from environmentally sensitive natural habitat. (See Figure 11.)

The 100 foot wide buffer to be acquired as part of the Caltrans/Corps project mitigation requirements shall be configured to protect the existing marshes and pond. Access to Gunpowder Point shall be via the south levee with emergency access via the north levee. (See Figures 6 and 11.)

Degraded or limited natural resources on Gunpowder Point are proposed to be enhanced with a program of wetland and upland restoration.

- Provisions--Midbayfront. The 100 foot wide buffer to be acquired as part of the Caltrans/Corps project mitigation requirements shall be configured to protect the existing marshes and pond. In addition, a 100 foot buffer is proposed around the F-G Street Marsh where existing structures permit.

Degraded areas of former wetlands are proposed to be restored to high quality salt marsh or mudflat in areas adjacent to Vener Pond, the E Street Marsh, and the F-G Street Marsh. (See Figure 11.) Additionally seasonal freshwater supply will be increased and urbanized runoff into the wetlands controlled.

- Provisions--Marsh Areas. Tidelands Avenue is proposed to cross Sweetwater Marsh in conjunction with improvements to the existing railroad levee.

The Tidelands Avenue extension is proposed to be a part of a restoration program for the railroad levee crossing of Sweetwater Marsh.

DIKING, DREDGING, FILLING AND SHORELINE STRUCTURES

COASTAL ACT POLICIES

Sections 30233 and 30235 of the Coastal Act establish the limited conditions under which diking, dredging, filling of wetland, restoration of wetland, and construction of shoreline structures may occur. Sections 30411(b) and 30607.1 provide addition

provisions for the filling of wetland provided it is accompanied by substantial restoration of degraded wetland.

EXISTING CONDITIONS

In the past there has been considerable alteration of the natural Chula Vista Bayfront. Filling to some degree has occurred along much of the shoreline. By far the most significant in terms of total fill and shoreline effected is the D Street fill. A railroad has also been constructed across the Sweetwater Marsh using fill material.

PLAN PROVISIONS

With the Bayfront Plan the only locations where diking, dredging, or filling of wetland would occur would be for the connecton of Tidelands Avenue (along the railroad tracks) to D Street Fill and possibly along the south levee connection to Gunpowder Point. These projects are part of the restoration plans for the wetlands and will result in a net gain in high quality wetland habitat.

The following list references the key provisions within the Plan which address the issue of wetland fill activity:

I. Detailed Environmental Management Provisions (Chapter III)

- Provisions--Gunpowder Point. Proposed Wetland Buffer and Levee Access. The 100 foot wide buffer to be acquired as part of the Caltrans/Corps project mitigation requirements shall be configured to protect the existing marshes and pond. Access to Gunpowder Point shall be via the south levee with emergency access via the north levee. (See Figures 6 and 11.)

Limit all human and domestic pet access to Sweetwater Marsh, Vener Pond, and E Street Marsh. Incorporate a hidden fence into a graded drainage swail to control access to the wetland without interfering with distant views. (See Section I.)

Direct human interest to specific controlled viewing locations along the south and east perimeter of the point.

Minimize disruption of wildlife by limiting fill in the wetlands (less than 1/2 acre) to only that necessary for levee reinforcement and to adequately maintain the proposed roadway.

Screen the more critical pond side of the southern levee with landscaping to reduce disturbance to marsh and water birds. (See Section G of the Circulation Section.)

Provide for pedestrian access along the southern levee on the E Street Marsh side of the roadway.

Deny all access to the northern levee except for emergency vehicles.

- Provisions--Marsh Areas. Proposed Tidelands Extension. Tidelands Avenue is proposed to cross the Sweetwater Marsh in conjunction with improvements to the existing railroad levee.

The crossing of the Sweetwater Marsh on the existing railroad levee will include fill on degraded portions of the marsh located on the western boundary of the existing levee.

The existing railroad viaducts spanning the water channels connecting the portions of the Sweetwater Marsh on either side of the railroad will be rebuilt to increase the length of the span and thereby, improve existing tidal flow to the eastern portion of the marsh.

- Provisions--Marsh Areas: The Tideland Avenue extension is proposed to be a part of a restoration program for the railroad levee crossing of Sweetwater Marsh.

In order to accommodate the wider cross section required for the roadway without adversely impacting the marsh, the amount of existing bridging will be increased, fill removed, and wetland restored to compensate for the less than 1 acre of fill required for the remaining portions of the roadway.

An equivalent area of high quality wetland will be created for the amount of poor quality (between eight foot and nine foot elevation) salt flats covered in the road widening.

Additional areas of high ground adjacent to the west side of the road will be lowered in elevation to establish an improved salt marsh in that area.

COMMERCIAL FISHING AND RECREATIONAL BOATING

COASTAL ACT POLICIES

Sections 30224, 30234 and 30255 of the Coastal Act encourage increased recreational boating, require the preservation of boating facilities, and give precedence to coastal dependent development, except in wetlands.

EXISTING CONDITIONS

Currently the only boating facilities within the Chula Vista Bayfront are the boat launch and marina on the Port District Property. Additional recreational boating berths are planned by the Port District for their site.

PLAN PROVISIONS

The Plan encourages recreational boating by allowing marine activity as a permissible use. An estimated 200-300 new recreational boating berths would be provided. In addition, a boat launch and other auxiliary marine activity could occur.

The following list references the key provisions within the Plan which address the issue of providing for boating activity:

I. Permitted Uses (Chapter III)

- Provision 5--Commercial Marine Related. "This land use designation includes commercial uses directly related to waterfront activities. Permitted uses include (1) ship chandleries, boating and yachting sales, etc.; (2) business and personal services: repair services catering to boat or marina needs and limited

ship repair facilities appropriate to the scale of the land resource and adjacent uses; (3) boat marinas or haul-out areas."

ENVIRONMENTALLY SENSITIVE HABITAT AREAS

COASTAL ACT POLICIES

Section 30240 of the Coastal Act provides for the protection of environmentally sensitive habitat areas by restricting uses within or adjacent to such areas.

EXISTING CONDITIONS

In addition to the marsh and mudflat areas discussed under the Water and Marine Resources category, some of the upland areas have been identified as potentially environmentally sensitive habitat areas. The marsh environment within the Chula Vista Bayfront is critical feeding and nesting habitat for three rare or endangered species; the California Least Tern, the Light Footed Clapper Rail, and the Beldings Savannah Sparrow. In addition, one rare plant species (Frankenia palmeria) is located on Gunpowder Point. This species is listed by the California Native Plant Society as rare in California. It has not been designated as rare, threatened, or endangered by the California Department of Fish and Game or U.S. Wildlife Service

PLAN PROVISIONS

In response to the need to protect these environmentally sensitive areas the plan preserves the existing marsh areas for use only as natural habitat and scientific research. The plan also calls for the restoration of degraded marsh (i.e., habitat for the endangered species) and the creation of an upland island for California Least Tern nesting. This island will provide a more secure nesting habitat than is currently available. In addition, approximately half of Gunpowder Point will be restored with native vegetation as natural habitat and the Frankenia palmeria protected.

The following references in combination with the references lists earlier under the Water and Marine Resources category list the key provisions within the plan which address the issues of sensitive habitat protection.

I. Detailed Environmental Management Provisions (Chapter III)

- Provisions--D Street Fill. Create a Least Tern Sanctuary jointly on privately held lands within the Bayfront planning area and on Port owned lands adjacent but outside the planning area.

Establish a minimum 10 acre sanctuary to be located at the southwest corner of the D Street Fill in order to maintain the greatest length of natural habitat on three sides of the sanctuary perimeter.

Provide a wetland channel to separate the sanctuary from the adjacent developed areas.

Design the channel for minimum maintenance utilizing tidal flushing to maintain channel depth. Channel should be adequate to provide a barrier to access for humans, dogs, and cats.

- Provisions—D Street Fill. The required provision for 9.6 acres of upland conversion to wetland by Caltrans shall be located adjacent to the Sweetwater Marsh and generally east of the proposed Least Tern Sanctuary.

Utilize this newly created wetland to create a channel separating the least Tern Sanctuary from the developed portion of the D Street Fill and to increase feeding areas in close proximity to the proposed sanctuary.

- Provisions—2 Gunpowder Point. Degraded or limited natural resources on Gunpowder Point are proposed to be enhanced with a program of wetland and upland restoration.

Preserve the existing Frankenia palmeri population. Protect adjacent lands and encourage the spread of the population.

Remove the berm around the lagoon in the southwest corner of Gunpowder Point and restore it to a healthy wetland. (This area could be established as a focus of one of the alternative interpretive centers.) Remove spoil from the wetland/upland mosaic in the northwestern corner and restore to wetland. Develop an interpretive center for public use. The Center can be located in areas of high wildlife use but should be carefully screened (i.e., developed as a photographic blind). Alternative locations for the interpretive center are shown on Figure 11.

Restore the undeveloped portions of the upland to a southern coastal scrub or other appropriate upland vegetation type(s). A restoration program should include: (1) removal of existing structures, spoil, and other remnants of human use; (2) grading to level spoil and fill borrow pits; (3) an approved revegetation design to establish a native and naturalized landscape community; and (4) a soil erosion design to control erosion of scarified areas into the adjacent wetlands during revegetation.

AGRICULTURE

COASTAL ACT POLICIES

Sections 30241 and 30242 of the Coastal Act provide for the preservation of prime agricultural land in order to assure the protection of an area's agricultural economy. The policies establish criteria for the conversion of lands to non agricultural uses. The criteria minimize conflicts between agricultural and urban land uses.

EXISTING CONDITIONS

Currently slightly over 100 acres of the site is in agriculture production. None of this land however is considered prime agricultural land.

PLAN PROVISIONS

The Plan does not provide for the preservation of the agricultural land within the Bayfront because it is not considered high quality agricultural land and agricultural activities would not be compatible with the type and scale of development proposed.

HAZARD AREAS

COASTAL ACT POLICIES

Section 30253(1) (2) of the Coastal Act requires new development to minimize risks in areas of high geologic, flood and fire hazard and to prevent structural damage to bluffs and cliffs.

EXISTING CONDITIONS

There are three potential sources of hazards within the Chula Vista Bayfront. They are land settlement hazards, seismic hazards and flood hazards.

The settlement hazards are attributable to the presence of relatively shallow surficial deposits of soft compressible bay mud throughout the historic marsh lands and tidal flats, as well as in deeper water areas. This mud, an organic silty clay, has an almost liquid consistency and makes a poor foundation material.

Two major faults have been mapped near the Chula Vista waterfront area: the north-northwest trending Rose Canyon/San Diego Bay/Tijuana fault, and the east-west Otay fault. Although the exact trace of each is not known, the San Diego Bay/Tijuana fault alignment is probably situated approximately in the center of the Bay, about one mile west of the Chula Vista waterfront. The Otay fault is thought to underlie alluvial fill in the Otay River valley approximately three miles south of the Chula Vista waterfront. While there is little reason to expect additional movements along this fault within the usual economic life of most engineering projects (50 to 100 years), the possibility of renewed activity cannot be disregarded in evaluating the safety of critical structures such as hospitals, power plants, schools, theaters, etc.

Parts of the Chula Vista Bayfront area are within the standard project flood area of the U.S. Army Corps of Engineers Sweetwater River Flood Control Project. However, with the completion of this project, those flood hazards will be eliminated.

PLAN PROVISIONS

In order to mitigate flooding, settlement, and liquefaction hazards the Bayfront will be graded to raise building elevations above the flood hazard level and building pads will be surcharged to compact and stabilize the site before construction. Building will have to be designed to meet earthquake safety requirements as required by code.

The following list references the key objectives within the Plan which address the issues of soil or geologic hazards:

I. Utilities and Areawide Grading (Chapter III)

- Objective 2--Soil Import. "Minimize the import of soil to that necessary for the protection of developable areas from flooding during concurrent design storms and high tide conditions."
- Objective 5--Storm Drainage. "Provide for an adequate on-site storm drainage system to preclude drainage directly into wetland habitat without adequate filtering of sediments or trapping of pollutants."

- Provision 3--Grading and Drainage. "The project requires importing up to one million cubic yards of earth to ensure building pads are above the 100-year flood level (about elevation 10) and above higher high tide level. Drainage of storm flows is affected by the elevation of higher high tide and having gravity pipe or street flow upstream at a minimum slope of six inches per one hundred feet. Special caution is required at the marshes to reduce runoff problems of silting and oil or chemical deposit. Some diversion of flood water is proposed and desilting/retention basins may be required. A major detention basin is proposed for the Midbayfront to accept surface drainage and provide for desilting and oil and chemical entrapment."

FORESTRY AND SOIL RESOURCES

COASTAL ACT POLICIES

This category of Coastal Act policies is not applicable to the Chula Vista Bayfront Area.

LOCATING AND PLANNING NEW DEVELOPMENT

COASTAL ACT POLICIES

Sections 30244, 30250(a), 30252, and 30253(3)(4) of the Coastal Act provide criteria for the location of new development. Generally, new development should be concentrated in areas of existing development with adequate public services. New development should provide adequate support facilities including provision for recreation facilities and for public transit, and should preserve archaeological or paleontological resources.

EXISTING CONDITIONS

The Chula Vista Bayfront north of G Street is essentially vacant, but is completely surrounded by urban development. To the north is the heavy industrial area of the City of National City, to the east is Interstate 5 and the City of Chula Vista. Development includes medium and high density uses between Interstate 5 and Broadway, with strips of commercial development adjacent to the arterial roads. To the south is the Rohr Plant and the SDG & E Power Plant.

PLAN PROVISIONS

The Plan concentrates development in the Midbayfront and upland areas removed from critical habitat to avoid environmental impacts. The Plan provides specific locations for a wide range of uses including mixed-use, general industrial, and public open space, and incorporates a development reserve to respond to changing market factors. A utility systems concept and an overall grading concept to assure provision of adequate public services are established in the Plan. In addition, recreation facilities, including visitor-serving commercial, parks, and recreational boating are provided. Interconnection of existing and proposed public transit is established by means of integrating circulation patterns in to the existing and proposed San Diego Trolley and Chula Vista Transit Systems. A minor archeological site has been identified and salvaged.

The following list references the key objectives within the Plan which address the issue of planning new development with adequate services:

I. Basic Land Use Objectives (Chapter III)

- Objective 1--Mixed Use. "Primary use of the Bayfront should encourage a mixed-use development combining residential and commercial/recreational uses. The mixed-use character of the Bayfront will (1) minimize the traffic impact of development on the surrounding roadway system by splitting the peak hour traffic between trip origins and destinations and (2) provide maximum utilization of the waterfront resource to achieve a waterfront with increased accessibility compatible with natural resources."
- Objective 2--Development Reserve. "A development reserve is proposed in which a wider range of specific land uses are permitted. This reserve will allow the Bayfront development to proceed with key parcels designated for particular uses while retaining the necessary flexibility to respond to future market conditions. The areas designated as reserve are those areas which could be developed as residential or commercial and not jeopardize the viability of a mixed-use development."
- Objective 3--Integrated Bayfront. "A primary objective is to link together into a single compatible mixed-use development the major upland parcels on either side of Sweetwater Marsh. The Midbayfront (between G Street and the Sweetwater Marsh) and the D Street Fill area are the major upland resources. Existing uses to the north (in National City) and to the south (Rohr Corporation and SDG & E facilities) are industrial.. Without an effective circulation link between the Midbayfront and the D Street Fill area, access to the D Street Fill area would be confined to a route through National City via the 24th Street interchange with I-5, thus land use options for D Street would be limited to industrial. Since there is extremely limited market demand for this use on land that would require heavy site improvement investments, the D Street land area would likely remain derelict and unsightly and pose a severe handicap on the financial feasibility for the rest of the Bayfront development."
- Objective 4--General Industrial. "General industrial uses should be specifically excluded from the Midbayfront area but permitted in the existing industrial areas adjacent to Rohr Corporation, the SDG&E facilities and the inland parcel. The reasons for this objective include the following."

The water-related lands of the Chula Vista Bayfront are a unique resource which should be reserved for public and private uses which can benefit from, and protect, the location.

There are no overriding functional reasons for using Bayfront land for general industrial use; the industrial growth of San Diego County is not likely to be impeded if the Bayfront lands are not developed for general industrial use.

The inclusion of more non-water related uses in the area would irreversibly commit the shoreline from National City south through the planning area as an area that could be marketed only for industrial purposes.

The overall economic welfare of Chula Vista will be better served by uses of this land which will broaden the economic base of the community."

- Objective 6--Public Open Space. "Ample opportunities should be provided for public open space and community and neighborhood parks adjacent to the natural environmental resources of the Bayfront to increase public access to the waterfront. While a number of access opportunities should be provided, including pedestrian, bicycle, and visual access from both adjacent development and major automobile circulation routes, care should be taken to protect wildlife resources from disruptive intrusion."

2. Basic Circulation Objectives (Chapter III)

- Objective 1--Regional Access. "Provide good regional access to the site from Interstate 5 and provide for future connections directly to Route 54."
- Objective 4--Transit Service. "Reduce dependency upon the private automobile by providing for complementary public transit service, including smaller mini-transit vehicles or private jitneys."
- Objective 5--Transportation Facilities. "Develop the network of transportation facilities, including freeways, major arterials, parking areas, and pedestrian and bicycle paths, into a system in which there is convenient transfer from one mode to another and an easily understood relationship between the various parts of the transportation system and the major destinations within the Bayfront."
- Objective 6--Traffic Generation. "Avoid congesting the freeways and connecting arterials by maintaining a mix of land uses where peak traffic generating periods are staggered throughout the day."

3. Basic Utility Service and Grading Objectives (Chapter III)

- Objective 1--Adequate Utilities. "Provide adequate sizing of utility lines to assure sufficient capacity for the most intensive users."
- Objective 4--Adequate Storm Drainage. "Provide for an adequate on-site storm drainage system to preclude drainage directly into wetland habitat without adequate filtering of sediments or pollutants."

COASTAL VISUAL RESOURCES AND SPECIAL COMMUNITIES

COASTAL ACT POLICIES

Sections 30251 and 30253(5) of the Coastal Act require the protection of scenic and visual qualities of coastal areas, and the preservation of unique visitor destination communities.

EXISTING CONDITIONS

The potential visual and scenic qualities of the Bayfront are currently not being fully realized. There is no access into the Bayfront, and the views of the area from adjacent Interstate 5 are marred by visual blight including billboards, automobile junk yards, and unlandscaped transmission towers.

PLAN PROVISIONS

The Plan calls for the removal of existing unsightly blight from the Bayfront and

opens up the entire shoreline for public access allowing the public to experience the views from the perimeter of the Bayfront outward. In addition, views from the freeway and roadways have been preserved, framed, or uncluttered in order to ensure a pleasant view of and establish a visual relationship with the marshes and bay-related activity. The entrances to the Bayfront have been designed to form visual gateways to the water's edge in order to support the feeling of proximity to the bay. Landscaping and architectural edges have been used to form sequences of views throughout the Bayfront. Building heights are limited and stepped in nature for sensitivity to views.

The following list references the key objectives within the Plan which address the issues of visual resources. For a list of special community resources please see Section B, Recreation and Visitor-Serving Facilities.

1. Permitted Uses (Chapter III)

- Provision 2--Residential. "Residential uses will be limited to high density multiple family dwellings in clusters of varying size and configuration to provide a broad range of housing types. Lower scaled townhouse-type construction will generally provide a transition at the critical waterfront edges to higher, more dense structures further inland. This configuration will afford maximum views and vertically integrate the proposed new uses into their natural setting."
- Provision 4--Landscaped Parking. "The San Diego Gas and Electric power line right-of-way that runs the length of the planning area is proposed to be physically improved at the ground level with landscaped parking areas. In order to encourage landscape improvements to this area, development bonuses are proposed for projects adjacent to the ROW to increase permitted densities and utilize the ROW for parking lot expansion to serve the development. In order to qualify for the development bonuses, it is recommended that provision be made for long term lease agreements for parking on the ROW between the project proponents and San Diego Gas and Electric Company."

2. Development Intensity (Chapter III)

- Provision 1--Height Limits. "The recommended building heights for the Bayfront are indicated in Figure 5. The prevailing height limit is two to three stories throughout most of the Bayfront. This limit will allow for extensive open space and landscape provisions without exceeding the traffic capacity of the proposed circulation improvements. There are areas in which the height limit varies from prevailing provisions due to program requirements, environmental management objectives or community form and appearance objectives. There are areas with lower height recommendations and there are also areas where program requirements, environmental management objectives, or community form and appearance objectives require that taller structures be permitted."

3. Basic Circulation Objectives (Chapter III)

- Objective 7--Scenic Views. "Provide motorists, both on freeways and on arterials within and adjoining the Bayfront, with enjoyable scenic experiences."
- Objective 9--View Intrusion. "Provide sufficient separation between pedestrian ways, bicycle paths, and roadways to ensure traffic safety and the elimination of noise, functional disruption, and visual intrusion by motor vehicles."

4. Proposed Roadways (Chapter III)

- Provisions 1--Views. "Tidelands Avenue, F-G Street Marsh Area. The alignment of Tidelands Avenue within the Port District's property is proposed to move westerly, north of G Street, to by-pass the present edge of the existing F-G Street Marsh. This relocation of the right-of-way will . . . and (3) introduce significant views to the waterfront from the moving automobile."

"Midbayfront Parkway. The central portion of Tidelands Avenue will be developed as a landscaped parkway with parkway and median planting, providing a substantial visual improvement and a strong structural element to organize physical development in the Bayfront."

- Provision 4--D Street Extension from Tidelands Avenue. "This important arterial provides the gateway to this portion of the Bayfront development. It will run adjacent to the 100 foot of wetland buffer, affording significant views of the Sweetwater Marsh. The pedestrian movement is recommended to be concentrated on the north side of the roadway adjacent to the proposed marina development."

5. View Points (Chapter III)

Planning and development of the Bayfront should ensure provisions of three types of views:

- Provision 1--Freeway and Entry. "Views from the freeway and major entry points; the primary concern is to ensure a pleasant view onto the site and establish a visual relationship with the Bay, marshes, and Bay-related development."
- Provision 2--Roadway. "Views from roads within the site, particularly Tidelands Avenue, to the marshlands, Bay, parks and other Bay-related development; locations should preserve a sense of proximity to the Bay and marshlands."
- Provision 3--Perimeter. "Views from the perimeter of the Bayfront outward, mainly toward the Bay. (In the first two instances, the view experiences are, for the most part, from a moving vehicle, i.e., momentary and unstructured. In this instance, the view is primarily a pedestrian-oriented stationary view and more sustained. These views will be experienced from the various parts of the open space and pathway system and enable persons to renew visual contact at close range with the Bay and marshlands.)"

PUBLIC WORKS

COASTAL ACT POLICIES

Section 30254 of the Coastal Act limits the construction or expansion of public works facilities to the capacity required to provide service to only those users permitted by the Coastal Act.

EXISTING CONDITIONS

Adequate water, sewage, and other utility services exist, but will need to be

extended onto the site.

PLAN PROVISIONS

The Plan provides for adequate sizes of utility lines to capacity for complete development of the Bayfront.

The Bayfront is serviced with water from the Sweetwater Authority which obtains water from local sources and the San Diego County Water Authority. Water service will be provided through 12 to 16-inch mains which will be required in E, F, G, and H Streets.

Phased development may require offsite pipeline construction, especially in industrial areas, to maintain adequate pressure and fire flows. A temporary connection to National City pipelines should be made during development of the D Street Fill area, as well as a permanent valved connection for the protection of facilities in either city.

The Metropolitan Sewerage System of San Diego (Metro System), of which Chula Vista is a member agency, serves Chula Vista via a 78-inch diameter trunk sewer which lies easterly of the onsite railroad line and drains northerly to the Point Loma Sewage Treatment Plant.

Considerable earthwork and periodic lift stations may be necessary to drain the sewage from the Bayfront. Phased development may require extensive offsite grading and sewer extensions.

The following objective within the Plan calls for adequate infrastructure facilities:

I. Basic Utility Service and Grading Objectives (Chapter III)

- Objective I—Adequate Utilities. "Provide adequate sizing of utility lines to assure sufficient capacity for the most intensive users."

INDUSTRIAL DEVELOPMENT AND ENERGY FACILITIES

COASTAL ACT POLICIES

Sections 30255, 30260-30264, 30232 and 30250(b) of the Coastal Act provide guidelines for the development of new or the expansion of existing coastal dependent industrial facilities, tanker facilities, liquefied natural gas terminals, oil and gas development, refineries, and electrical generating plants.

EXISTING CONDITIONS

The Rohr Corporation facilities and the SDG&E Generating Plant and transmitter lines represent the only two major industrial and energy facilities currently within the Bayfront.

PLAN PROVISIONS

The Plan allows for the expansion of existing industrial facilities but does not allow additional non-coastal dependent industrial development to occur beyond the areas currently shown as industrial use on the Land Use Plan.

The following list references the key objectives within the Plan which address the issue of coastal dependent industrial expansion:

I. Basic Land Use Objectives (Chapter III)

- Objective 4--General Industrial. "General industrial uses should be specifically excluded from the Midbayfront area but permitted in the existing industrial areas adjacent to Rohr Corporation, the SDG&E facilities and the inland parcel. The reasons for this objective include the following."

The water-related lands of the Chula Vista Bayfront are a unique resource which should be reserved for public and private uses which can benefit from, and protect, the location.

There are no overriding functional reasons for using Chula Vista Bayfront land for general industrial use; the industrial growth of San Diego County is not likely to be impeded if the Chula Vista Bayfront lands are not developed for general industrial use.

The inclusion of more non-water related uses in the area would irreversibly commit the shoreline from National City south through the planning area as an area that could be marketed only for industrial purposes.

The overall economic welfare of Chula Vista will be better served by uses of this land which will broaden the economic base of the community."

VI. IMPLEMENTATION

The Chula Vista Bayfront Land Use Plan is proposed to be implemented as a Specific Plan per the California Government Code Sections 65450 et seq. The implementation provisions will include: (1) the identification of financing mechanisms for the various elements of the Plan, (2) the establishment of management guidelines, (3) the provision of regulations and standards controlling specific projects, and (4) the commitment to the wetland enhancement programs.

FINANCING

This section will identify all the relevant funding sources available in the public sector under various federal, state, and local programs for financing the public improvements for the Bayfront. Particular attention will be focused on the opportunities for joint funding arrangements among the several agencies involved in projects in the Bayfront.

MANAGEMENT

This section will identify the critical interagency coordination and public/private partnerships possible for the sharing of long term management responsibilities for the public resources. Particular attention will be focused on delineating responsibilities for maintenance of wetlands, wetland buffers, parklands, and pedestrian improvements within or contiguous with private development.

REGULATIONS AND STANDARDS

This section will define the development regulations and standards controlling private development and public projects in the Bayfront. Particular aspects of development for which regulations and standards will be prepared include:

- Parking standards
- Signage
- Use and facility standards for on-site improvements
- Detailed roadway standards
- Grading regulations particularly to control impacts on wetlands during construction
- Drainage regulations particularly to control impacts on wetlands
- Landscaping standards
- Design review provisions

COMMITMENT TO WETLAND ENHANCEMENT

This section will identify the form of the city's commitment to wetland enhancement.

APPENDIX A: DEVELOPMENT POTENTIAL

Following a review of the assessment of alternatives, the City of Chula Vista identified the preferred alternative to be D-2 incorporating a mixed use development concept for the D Street Fill and a destination resort hotel/conference center on Gunpowder Point. A number of specific modifications to the precise land use mix were also identified in order to mitigate impacts identified in the alternatives assessment or to improve the balance of uses.

MODIFICATION TO THE TESTED ALTERNATIVE

The modifications included:

1. Increase the amount of public land devoted to community or neighborhood parks. The Land Use Plan increased this allocation from 19.7 acres to 31 acres.
2. Identify areas in the Plan where some flexibility could be provided for future land use commitments. The Land Use Plan provides for three development reserves totaling 22 acres for which the permitted land uses are broader than the remaining land use designations.
3. Study the site planning implications for a hotel on Gunpowder Point with sufficient area for the necessary building coverage and parking requirements in order to recommend an appropriate amount of upland reserve to be included in the Plan. Given the financial feasibility constraints identified requiring on-site parking for the hotel operations and following detailed site planning studies for the island, the revised program reduced the required building envelope from 22 to 14 acres.
4. Incorporate all the opportunities for wetland enhancement identified in the alternatives assessment into the Plan. The Land Use Plan incorporated a number of enhancement provisions that increased the total wetland area or improved existing wetland area within the Bayfront by a total of 21 acres.

DEVELOPMENT POTENTIAL

Table A-1 provides a summary of anticipated developmental potential, e.g., the amount of additional development that would be permitted by the Plan. Depending on how the development reserve is utilized, the extent to which the SDG & E right-of-way is utilized for parking by adjacent developments, and the bonus provisions exercised, the configuration of development types will vary somewhat.

TABLE A-1: SUMMARY OF ANTICIPATED DEVELOPMENT POTENTIAL

<u>LAND USE</u>	<u>TOTAL (ACRES)</u>	<u>EXISTING DEVELOPMENT (ACRES)</u>	<u>PROPOSED DEVELOPMENT (ACRES)</u>	<u>PROPOSED DEVELOPMENT</u>
Industrial	270	231	39	(subject to site variation)
Residential	37	—	37	555 to 1,110 d.u.*
Development Reserve	22	—	22	412,000 sq. ft. or 330 to 660 d.u.* or combination
Commercial				
● Office Park	48	—	48	900,000 sq. ft.
● Highway-Related	23	13	10	109,000 sq. ft.
● Marine-Related	8	—	8	87,000 sq. ft.
● Specialty Retail	4	—	4	40,000 sq. ft. allowance
● Hotel	14	0	14	400 rooms plus conference facilities
Landscaped Parking	<u>20</u>	<u>10</u>	<u>10</u>	350,000 sq. ft.
TOTAL	446	254	192	

* Dwelling units.

APPENDIX B: PUBLIC ACCESS OPPORTUNITIES

One way to evaluate the Bayfront Plan's coastal accessibility is to identify the number of person days spent in the Coastal Zone over the course of a year. In order to do this, person day projections for each land use were estimated in three categories: residential person days within the Bayfront (i.e., those who live within the Coastal Zone); employee person days within the Bayfront (i.e., those who work within the Coastal Zone); and visitor person days to the Bayfront (i.e., those who visit the Coastal Zone for shopping or recreation).

The Coastal Zone person day estimates were generated by converting SANDAG vehicular generation rates into person day rates assuming an average vehicular loading rate of 1.4. Table B-1 lists the projected residential, employment, and visitor annual person day estimates for each land use category. The generation assumptions for each category are listed on the following page.

TABLE B-1

CHULA VISTA BAYFRONT COASTAL ZONE ESTIMATED ANNUAL PERSON DAYS
(X 1,000)

LAND USE	RESIDENT PERSON DAYS WITHIN BAYFRONT	EMPLOYEE PERSON DAYS WITHIN BAYFRONT	VISITOR PERSON DAYS TO BAYFRONT	TOTAL
Industrial	--	6,478	--	6,478
Residential	427	--	--	427
Commercial				
Office	--	717	--	717
Highway	--	102	5,107	5,209
Marine	--	7	371	378
Specialty	--	17	873	890
Hotel	--	96	202	298
Open Space				
Wetland, Wet- land Buffer and Upland Resource	--	--	194	194
Parks	--	--	295	295
Marina	--	--	409	409
TOTAL	427	7,417	7,452	15,295

Source: Sedway Cooke Associates

NOTES TO TABLE

Residential

15-30 dwelling units per acre
1.4 persons per residential dwelling unit
365 person days per year per resident

Employment

Business Park: 1 employee per 350 sq. ft.
Commercial Development: 1 employee per 600 sq. ft.
Industrial: 100 employees per gross acre (This figure can vary widely,
depending on the type of industrial development.)
Hotel: 1 employee per room

240 person days per year per employee

Visitors¹ (Assumes 1.4 persons per vehicle)

Hotel at 70% occupancy: 365 days a year, average 2 persons per room

Highway Specialty and Marine Commercial: 56 persons per day per 1,000 sq. ft.

Wetland Buffer and Upland Resources: 7 persons per day per acre*

Neighborhood Park: 7 persons per day per acre*

Community Park: 84 persons per day per acre*

Marina: 5.6 persons per day per berth

Assumes 125 holiday weekend days a year.

* Doubled on weekends and holidays.

¹ Source: San Diego Association of Governments, "Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region," November 1981.



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